THE POLAR TIMES

Fall-Winter 2003

The President's Letter

It has been an exciting first-year as President of the Society, having inherited the position as a result of the APS election earlier in 2003. First of all, trying to fill the shoes (or mukluks) of the outgoing president Dr. Gisela Dreschhoff is not an easy task. Gisela and others put together great efforts and energy in scheduling the third Symposium of the Society, which was held in Columbus, Ohio, and hosted by the Byrd Polar Research Center, 9-10 October 2003. An account of the Symposium is given elsewhere in the *Times*, for I want to concentrate and emphasize here the current state of affairs for the Society as I see it. Gisela's choices for recruiting the speakers for the Symposium, Dr. Julie Palais (NSF/OPP) and Kristin Larson, were excellent, as we discovered when the program commenced.

We have been blessed for several years with several individuals who have volunteered their time and energy toward the success of the Society. Specifically, I want to acknowledge our primary officers, the ones who run the operations behind the scenes. They are Bob Kremenak (Membership), Frank Stokes (Secretary), Dave Baker (Treasurer), and Cliff Bekkedahl (Editor). The time has arrived, however, for some of them to relinquish those responsibilities and retire to a more relaxed kind of life—by their own choice, I might add. A new president doesn't necessarily conduct a housecleaning. Bob Kremenak, in particular, has managed membership activities and records for several years and is ready to hand over the reins. It is frankly a very demanding job and requires someone who can manage the details of the 1,100 members and their requirements. Frank Stokes has voiced the same for stepping down. What this means is that we need to hear from you, the members, to come forward and express your willingness to contribute to an organization that you have appreciated and been involved with for many years. Details of what is involved in any of the positions can be achieved by contacting each of these officers at their email addresses (see p. 2). We are not talking about rocket science, but day-to-day management of activities involving bookkeeping and general housekeeping of records. Long-time members, or even new ones, are invited to inquire and assure a place in the archives of the American Polar Society.

For those interested, start with Bob Kremenak, but also talk (email or telephone) to Frank Stokes. It is time for new blood, and we invite your interest.

That's a lot to cover, in my second letter as President, but I am sure you agree it is important. As a forecast of Society activities, we will probably not have, in 2004, a Symposium comparable to the one we just had, but instead will have more time to plan for a later one. Do not relax, however, by any means, as this is your organization, and we are open to comments and suggestions about how we can provide better service and improve our visibility and membership recruitment. In that vein, contributions are always invited, including life-memberships, which fortify our budget and release you from the burden of annual reminders of dues. Give the Treasurer and Membership Chair a break and think about it. We know there are more people out there interested in joining who are not aware of what can be gained by membership. Please pass the word along!! I am looking forward to 2004 and a thriving and vibrant Society. With best wishes to all of you,

John Splettstoesser

ABOUT OUR FRONT COVER

Landscape at Mount Takahe, Antarctica. Photo by Nelia Dunbar.

American Polar Society

The American Polar Society was founded Nov. 29, 1934, to band together all persons interested in polar exploration. Membership dues are $15 a year ($17, foreign) and entitle members to receive ***The Polar Times*** twice a year. The American Polar Society is classified as a tax exempt organization under Sec 501(C)3 of the IRS Code. For more information about the American Polar Society, contact **Capt. FRANK STOKES, APS Secretary,** at 1.850.497.0759 or send email to *sto346@yahoo.com*.

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Membership Letter

Annual dues notices went out to about 600 of you recently. By now in mid-November nearly 300 of you have sent back checks. Most of you pay a year at a time, but many send checks for two or three years and a few for Life Membership—which is why only 600 dues notices went out, even though our membership is about twice that. I stamp checks "For deposit only" and put them in a local bank, from which Treasurer David Baker in Medford, Oregon can withdraw funds as needed to pay printing and mailing costs as well as other of the Society's expenses. I don't mail your checks to Oregon any more since a fat envelope full of them got lost in the mail last year.

Interesting mail comes to the Membership Center. An example is a letter postmarked September 5, 2003, from William J. Brown in Arlington, Va. It came in one of August Howard's old 1950s-era Polar Society envelopes containing an "Application for Membership" card dated 30 November, 1958! In the space on the card asking "If you were ever in the polar regions, please tell name of expedition, region visited and year or years," a young William Joseph Brown had written the following: "USS Nautilus, 90 degrees N., 3 Aug 1958. Also at 70 degrees N (under sea ice) in 1957, drain pump loss, turned back!" Also in the envelope was a one-dollar bill, which was the amount for 1958 membership dues printed on the card

It turns out that Bill Brown, who had filled out the application card back in 1958, had finally discovered it again, unmailed, while sorting papers in July 2003. Wondering if we still existed, he mailed it finally, to the August Howard Rego Park, N.Y., address printed on the envelope. Rose Howard was still living there then, and her son Alan forwarded the old envelope to me at the Membership Center in Iowa City. I was amazed to hear from a Nautilus crewmember from that famous and historic first under-ice transit of the North Pole and responded telling Bill we were honored to accept his tardy one-dollar dues payment. He replied, "Thanks for accepting my application and dues. Though I do tend to procrastinate, 45 years is my personal worst." He added that, "I was the helmsman and planesman of the watch when 90 North was attained."

Now, as I enter the final year of my term as Membership Chairman, I know I'll miss contacts like that extraordinary one with William J. Brown. As I enjoyed corresponding with him, I've also enjoyed working with all of you. This is a great job but it is time to pass it to a new volunteer. The transition needs to be complete by early 2005 at the latest, so please contact President John Splettstoesser if you are interested. The salary is zero, you will need a good computer and a free hour or so a day, but the rewards are many and varied. Duties include maintaining the membership list, collecting dues and attracting new members. The Society pays your expenses. Please don't hesitate to contact me with questions or comments at the APS Membership Center, P.O. Box 464, Iowa City, IA 52244-0464, or by phone at 319-338-3457, or e-mail at ***ampolars@mchsi.com.***

Best wishes for the coming year,

Bob Kremenak

PLEASE NOTE: Cliff Bekkedahl, editor of ***The Polar Times***, has moved. His new address is 500 E. 77th Street, Apt 2815, NY, NY 10162. His phone number is (212) 717-5839 and his email address is cv1957@verizon.net.

The Polar Times

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American Polar Society Symposium: Women in Polar Regions

The American Polar Society held its 2003 Symposium at the world-renowned Byrd Polar Research Center (BPRC) at Ohio State University, in Columbus, on 9-10 October. The theme, "Roles of Women in Polar Regions: Past, Present, and Future," was a tribute to those who were often overlooked and, in some cases, discriminated against in their efforts to conduct research and exploration in the polar regions.

The Symposium was attended by some 80 members and included 18 papers presented by a variety of individuals, organized by a program committee consisting of **Kristin Larson** and **Julie Palais**. Forming the local organizing committee were **Lynn Everett**, **Laura Kissel** and **Lynn Lay.**

Among the barrier-breaking polar pioneers who spoke were **Mary Crawford**, the first female flight officer in the U.S. Antarctic program; **Edith "Jackie" Ronne,** one of the first two U.S. women to winter-over in Antarctica; and **Colin Bull,** who, as Director of the Institute of Polar Studies (now BPRC), assembled the first all-female research group in the U.S. Antarctic Program and managed to obtain U.S. Navy approval and NSF funding to enable it to conduct field research in the 1969-70 austral summer. Previously, Antarctica was truly a "man's world." The Symposium was dedicated to **Lois M. Jones** (1934-2000), the leader of that first all-women field team.

PHOTO BY BILL MCINTOSH; COURTESY OF NELIA DUNBAR

Happy in the field: geochemist Nelia Dunbar in Antarctica

The presentations all took place in room 240 of Scott Hall, home of the BPRC, under the twin gaze of the portraits of George Hubert Wilkins (1888-1958), the Australian who in 1928 made the first powered flight in Antarctica, and his American wife Suzanne. Sledges from various polar expeditions also decorate the walls of this room.

Kenneth "Utuayuk" Toovak, an Inupiaq elder from Barrow, Alaska, opened the Symposium with an invocation in his native tongue, followed by a welcome from BPRC director **Berry Lyons.** Then **Gisela Dreschhoff,** outgoing president of the APS, handed over the reins to our new president, **John Splettstoesser.**

Writer **Gretel Ehrlich** spoke about her new book, *This Cold Heaven*, about seven seasons in Greenland, which, she said, saved her life after she was struck by lightning in Wyoming and suffered three ensuing cardiac arrests. **Colin Bull** then discussed the difficulties of organizing the first all-women research team in the U.S. Antarctic Program.

Three generations of Yakutat Tlingit women from southeastern Alaska—**Elaine Abraham;** her daughter **Judy Ramos;** and her 9-year-old granddaughter, **Maka Monture**, in native dress—spoke on the topic of "Native Women as Professionals in the North."

Anthropologist **Nancy Chin** talked about her ongoing project to uncover "differences that arise from belonging to one sex or another" in Antarctica; answers, it seems, remain elusive.

A four-member panel discussion including **Judy Ramos**; **Mildred Crary**, whose late husband Bert Crary was the first person to stand at both geographic Poles; **Andy Monaghan**, research associate at the BPRC's Polar Meteorology Group; and **Kathy Young**, longtime field camp manager in Antarctica and Greenland, took on the topic of cultural change in the polar regions and its implications for women.

After lunch, **Peter Wilkniss** gave an insider's view of how the National Science Foundation's Office of Polar Programs implements policy, and **Ellen Moseley Thompson** spoke about her two decades of glaciology in Greenland and Antarctica, highlighting the evolution of ice-core drilling systems, which have steadily become lighter and more transportable.

Julie Brigham-Grette spoke eloquently about the important role that mentors, most of them men, played in her career as a geologist and also about her struggles in being accepted as an equal during her nine seasons of fieldwork in remote northeastern Russia.

Geochemist **Nelia Dunbar,** with 16 seasons in Antarctica to her credit, spoke on what to her are the many joys of field work: "For me, it was never really a huge struggle," she says. Among the things that make her happy: spending long hours on the rim of an active volcano.

Rita Horner told about her experiences as a young graduate student in Arctic Alaska in the mid-1960s, when she encountered resistance to an unmarried woman working at the Arctic Research Laboratory in Barrow: "I look at those young women graduate students going to the Arctic, who don't know that just 30 years ago, women weren't allowed to do the kinds of things they do today!"

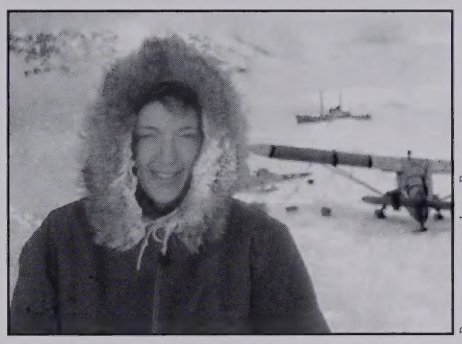


PHOTO COURTESY OF JACKIE RONNE

One of the first two women to winter in Antarctica, Jackie Ronne, at Stonington Island during the Ronne Antarctic Research Expedition of 1947-48.

John Behrendt contrasted life during the 1950s and 1960s in Antarctica, when no women were allowed to work there, with his work in the late 1970s, when women were well-integrated into the U.S. research program. The 90 percent drop in U.S. aircraft accident fatalities in Antarctica between those two eras, he suggests, just might be linked to women's participation in the research program!

On Thursday night, the Symposium banquet included the APS Awards Ceremony (see separate story).

Friday's program began with a fascinating slide talk by **Edith "Jackie" Ronne**, one of the first two women to winter in Antarctica (the other was Jennie Darlington), as part of the Ronne Antarctic Research Expedition (1946-48), led by her husband Finn, whom she "had absolutely no intention of accompanying" to Antarctica. Fortunately, she did go, making history and greatly assisting the expedition. "I do not regret my decision," she says, adding that she has now visited Antarctica 15 times. "It has made my life."

Dr. Jerri Nielsen next spoke vividly about her rescue from the South Pole, which she called "a prison of ice," after she discovered and treated a cancer in her own breast in 1999.

Sheila Nickerson described the life of Tookoolito (1838-1876) of Baffin Island, an Inuit woman who served as an interpreter to explorer Charles Francis Hall for 11 years and

(CONTINUED ON PAGE 4)

Photo Courtesy of Mary Crawford

Naval Flight Officer Lieut. Mary Crawford, the first woman to earn this title in the U.S. Navy and the first female aviator in Antarctic Development Squadron Six (VXE-6), circa 1981.

(Continued from page 3)

who was also a member of the Polaris ice drift party, a story she tells in her book *Midnight to the North*.

Mary Crawford, who was the first woman to earn the title of Naval Flight Officer in the U.S. Navy, and in 1981-82 became the first female aviator in Antarctic Development Squadron Six (VXE-6), gave a talk titled, appropriately, "The Sky's the Limit for Women in the Polar Regions." In Antarctica, she learned the dying art of sextant navigation aboard the ski-equipped Hercules LC-130s and also served as assistant officer-in-charge of the squadron's Pararescue Team, despite her commanding officer's wonderment at her jumping out of "a perfectly good airplane." She said she wished she could have come back to Antarctica a decade after she worked there, so that she could "just come in and do my job without all the extra attention" of being a pioneer, but she also noted that the military is "a meritocracy based on skills and performance."

After lunch, several drawings were held for items donated to the Society for raffle. A wool rug depicting a puffin was given by **Sherry Rougeau** from the **Claire Murray Company** of Newport, Rhode Island. An obviously-embarrassed **Kristin Larson** drew her own name from the hat, but nevertheless accepted the prize, blurting out, "I did buy 5 tickets!" **Ray Noonan** won a block of new British polar stamps given by **Dave Baker**, Society Treasurer, while Mary **Crawford** won an Old Antarctic Explorers Association commemorative coin donated by **Billy-Ace Penguin Baker.** In addition to the revenue brought to the Society treasury by the raffles, we are grateful for donations from Society members **George Doumani, Gisela Dreschhoff, Dale Reed**, and **George Toney,** as well as **Quark Expeditions**, for assistance in defraying Symposium expenses.

Edna MacLean, president of Ilisagvik College in Barrow, Alaska, discussed the lives and work of three Inupiaq women, including herself, Presbyterian minister **Mary Ann Rexford**, and **Charlotte Brower**, president of the North Slope Borough Assembly.

Polar tourism was picturesquely portrayed by **Susan Adie**, who spends half of each year serving as expedition leader on voyages to Antarctica and the Arctic. On one trip, the Russian master of her vessel said to her, "No boy or girl, no woman or man—I am captain, you are expedition leader."

Physical geographer and archaeologist **Wendy Eisner**, in a talk titled "Graceful Observation: Women, Science and Community in the Polar Regions," gave an overview of her 15 years of research in the Russian Far East, Greenland and Arctic Alaska, identifying three characteristics most valuable for productive research in the polar areas: cooperation, humor and a keen awareness of the physical environment.

Terry Wilson gave a presentation on plans for an International Polar Year in 2007-2008, which, it is hoped, will address compelling scientific issues, engage the public and develop the next generation of scientists. For more information, see http://dels.nas.edu/prb/ipy.

John Splettstoesser closed the Symposium with a handsome, rapid-fire slide show of beautiful images from both polar regions.

To all those who made the Symposium possible, we at *The Polar Times* offer our thanks on behalf of all APS members and attendees. ❑

Photo courtesy of Mary Crawford

Lieut. Paul Hubbard, the first female pilot in Antarctic Development Squadron Six (VXE-6), circa 1981.

APS 2003 Awards

At the 2003 American Polar Society Awards Ceremony, held in conjunction with the Society's symposium at Ohio State University in Columbus, Ohio, the following awards were bestowed by the Society's inimitable master-of-ceremonies, Brian Shoemaker, on 9 October 2003:

The **2003 Honorary Service Award** was presented to **Dr. Mort D. Turner**, Program Manager for Earth Sciences at the National Science Foundation's Office of Polar Programs for more than 25 years from 1959 to 1984. Dr. Turner was the first to hold the position and worked tirelessly to foster high-quality U.S. research in the spirit of the Antarctic Treaty.

The **2003 Honorary Membership Awards** were presented to **Dr. Sayed Z. El-Sayed** and **Dr. Kenneth L. Hunkins** and, in absentia, to **Dr. Anthony (Tony) Gow** and **Dr. James Van Allen**.

Dr. El-Sayed, a leading Antarctic biological oceanographer with extensive at-sea Antarctic field experience, played a central role in ecosystems studies of the Southern Oceans for nearly four decades beginning in the late 1950s. Most critically, he initiated the BIOMASS (Biological Investigations of Marine Antarctic Systems and Stocks) program. Dr. El-Sayed also served as convener of the Scientific Committee on Antarctic Research (SCAR) Group of Specialists on Southern Ocean Ecosystems. He is currently an emeritus professor at Texas A & M University.

Dr. Gow, an eminent U.S. glaciologist who for more than four decades has studied ice cores and glaciers in the Antarctic and Greenland, has an extraordinary breadth of field experience in both polar regions. Now retired, Dr. Gow was the leading research scientist at the Cold Regions Research and Engineering Laboratory (CRREL). In 1995, he was awarded the International Glaciological Society's prestigious Seligman Crystal.

Dr. Hunkins, a leading U.S. geophysicist at Columbia University's Lamont-Doherty Earth Observatory, conducted Arctic Ocean studies from the 1950s into the 1990s and has extensive field experience on Arctic sea ice. He pioneered ocean studies on drifting Station Alpha, T-3 and AIDJEX, and at the height of the Cold War, was one of the key U.S. researchers of the Arctic Ocean. Dr. Hunkins remains active today as a special research scientist at Lamont.

Dr. Van Allen is among the leading U.S. scientists of the twentieth century. He served as the 'father' and initiator/prime mover of the International Geophysical Year of 1957-8. Science packages flown aboard the first polar-orbiting satellites led to the discovery of the 'Van Allen Radiation Belts' around Earth. ❑

OSU Polar Rock Array Will Aid Antarctic Research

Repository centralizes rock collections

***The Columbus Dispatch*, 28 October 2003, by Mike Lafferty**—It's no Fort Knox, but polar researchers say a new repository's collection will be worth more than its weight in gold.

Climate control and a good lock, however, are all that are needed to protect the tens of thousands of pounds of material being sorted, photographed and stored in the National Polar Rock Repository at Ohio State University.

Scientists from across the country started sending loads of rocks to Ohio State well before the 4,200-square-foot building, built with a $530,000 National Science Foundation grant, opened this month on West Campus adjacent to Scott Hall, home of the Byrd Polar Research Center.

Ohio State and the state Board of Regents kicked in $200,000 for construction.

> *The repository will give researchers access to rocks recovered during more than 90 years of polar exploration.*

The repository will store rocks from Antarctica and the Arctic, along with field notes, air photos and maps, raw data, paleomagnetic cores and ground rock and mineral residues.

Each rock and accompanying information will then be entered into the Antarctic Geologic Database.

The repository will give researchers access to rocks recovered during more than 90 years of polar exploration and provide an opportunity to do preliminary research before leaving for Antarctica.

And it could eliminate the need to travel there at all, saving researchers hundreds of thousands of dollars and lessening the human environmental "footprint" in a fragile land, said Anne Grunow, the curator and a veteran of 12 expeditions.

As many as 70 researchers nationwide propose trips to Antarctica every year.

Grunow and assistant curator Sue Rose are charged with sorting, cataloging, photographing and storing the rocks in cardboard trays that will be stacked on 12-foot-high metal shelves.

More than 50 cardboard boxes, likely weighing more than a ton, already are stacked along one wall, awaiting classification.

"That's only the tip of the iceberg," Grunow said.

Most of the specimens—ranging from stones suitable for skipping over a pond to boulders a couple of feet in diameter—are being temporarily stored at the university's food-services storage department.

The rocks are sent there before they are classified and photographed, Grunow said. "There are a lot of rocks waiting out there."

University of Wisconsin geologist Campbell Craddock, one of the first scientists to begin systematically exploring the continent, shipped 180 boxes of rocks to Ohio State.

"Many of the places we went, we were the first people ever there," said Craddock, 73, who made eight trips to Antarctica.

Dipti Vaidya • Dispatch Photos

Antarctic rock, above, is part of polar rock array housed at Ohio State University.

Some of the samples date to the earliest Antarctic explorations. For example, several boxes of rocks collected by British explorer Sir Raymond Priestly from 1907 to 1909 were shipped from Carleton College in Minnesota to Ohio State.

"The British will probably scream when they learn we have them," Grunow said. "They can come here and look at them."

The British maintain their own polar rock collection at Cambridge University. But because it's not well-organized, British researchers already have asked Ohio State for help.

More information about the database is available online at http://bprc.mps.ohiostate.edu/rr/projects/agd/ ❑

Ohio State Preserves Byrd Films

***Columbus Dispatch*, 3 Sept. 2003, by Lauren McDowell**—In a chilled room in the Ohio State University Archives, the frigid pursuits of Adm. Richard E. Byrd are well-documented on aging film.

But these movies, which capture Byrd and his team covering thousands of frozen miles across Antarctica, were hidden from public view until now.

Armed with a $5,000 federal grant, polar archivist Laura Kissel will have two 16 mm reels cleaned before making copies.

Harrison H. Richardson, a medical officer on the U.S. Antarctic Service expedition, shot the film between 1939 and 1941, giving a unique perspective of everyday life in Byrd's camp, Kissel said. Scenes include men shaving, packing and killing seals for their meat.

The reels will be sent to Colorlab, a film preservation company in Maryland, where experts will repair any shrinking or fading, Colorlab President Russ Suniewick said.

After the original film is restored, the company will make a copy onto a new type of filmthat should last about 200 years.

From that copy, the company will make one good film copy that OSU archivists can use in presentations, Suniewick said. The company also will make a digital master to be used in making DVDs and videotapes. These can be viewed by the public.

The original will end up in the OSU archive facility, where items are stored at low humidity and temperatures no higher than 60°F.

OSU purchased the Byrd archives in the 1980s.

Richardson's son, James Richardson, donated 18 reels of his father's film, both 35 mm and 16 mm, from Byrd's expeditions.

Kissel and Bob W. Wagner, an OSU professor emeritus and former chairman of the Cinema and Photography Department, chose the two 16 mm reels from the 1939 expedition because little material exists from that trek.

The National Film and Preservation Foundation, which awarded the grant, liked the Richardson films because they show an insider's perspective and represent some of the first color footage of Antarctica, said Jeff Lambert, assistant director of the foundation.

Wagner said the 16 mm reels are the most interesting because Richardson carried his camera with him.

The two reels represent only the tip of the iceberg of the Byrd collection, but the quantity and price tag for preserving all the film is daunting, Kissel said.

"It's not feasible that we'll get it all done, ever," she said. "You can't save everything." ❑

The American Polar Society: Past, Present and Future

By Raimund E. Goerler and Lynn Lay (Byrd Polar Research Center, The Ohio State University)

Founded in 1935, the American Polar Society (APS) developed from popular interest in the events of exploration and discovery in polar regions. During its nearly seven decades, the Society has served as a clearinghouse of information through its publication *The Polar Times*, when for many years there was no central source of information to guide polar scientists and explorers. At the same time, the Society has benefited from and stimulated popular interest in the polar regions.

August Howard and the Origins of the American Polar Society

The mid-1920s were an especially exciting time for polar exploration, particularly as airplanes were proving their usefulness in the field. In 1925, Roald Amundsen and Lincoln Ellsworth attempted to use airplanes to reach the North Pole, but failed. A year later, Richard Byrd claimed credit as the first to fly over the North Pole. Two years later, Byrd organized an expedition to Antarctica that would culminate in a flight over the South Pole. Before Byrd could reach the South Pole, Sir Hubert Wilkins, an Australian who was financed by American publisher William Randolph Hearst, became the first to fly in Antarctica in 1928.

August Howard was born "August Horowitz" on January 2, 1910, but he changed his name in the early 1940s. The son of a tailor and Russian immigrant, he grew up fascinated by Byrd and the romance and adventure of the North Pole flight. Polar exploration and discovery became the avocation of his life, even as it was the vocation of his hero, Byrd. Howard's other interest was in the Boy Scouts. In 1928, after years of pleasure in scouting, he became an employee of the National Council of Boy Scouts of America, which would become his life-long career.

> *The son of a tailor and Russian immigrant, Howard grew up fascinated by Byrd and the romance and adventure of the North Pole flight.*

Howard's interests in polar exploration, Byrd, and scouting all came together in 1928, when Byrd and the Boy Scouts conducted a national campaign to select a scout to accompany Byrd on his first expedition to Antarctica. Howard and the successful applicant, Eagle Scout and Sea Scout Paul Siple, became close friends.

Photo courtesy Ohio State University Archives

Left to right: Paul and Ruth Siple, Rose and August Howard.

Forerunners of The Polar Times

To report the activities of fellow scout Siple in the first Byrd Antarctic Expedition (1928-30), Howard created *The Metropolitan Pilot*, a mimeographed newsletter distributed monthly to relatives and friends of Paul Siple and to the 25 members of Siple's Sea Scout Ship. This was the official beginning of Howard's career in journalism and the first step towards *The Polar Times*.

(Biographical information about August Howard cited here is found in RG 56.16, box 1, folders 1-4, at The Ohio State University Archives. Documentation consists of newspaper clippings, obituaries and an oral history interview of Doris Howard by Peter Anderson in 1989, as well as documentation of The Little America Times *and the records of the American Polar Society.)*

In 1933, Byrd began his second expedition to Antarctica. Siple joined him again, as he would on each of Byrd's expeditions. By this time, Howard was assistant to the director of publicity for the National Council of the Boy Scouts of America and also advised the Manhattan Boy Scout Press Club.

For Howard, Byrd's second expedition was an opportunity for another venture into journalism: *The Little America Times*, named after Byrd's base in Antarctica. In 18 issues, from December 27, 1933 to May 31, 1935, *The Little America Times* reported monthly the activities of the Byrd expedition as well as those of Lincoln Ellsworth's expedition of 1935. The newspaper was distributed to friends and relatives of expedition members. Much of its content consisted of transcriptions of radio broadcasts from Little America.

Competition Concerns

As *The Little America Times* expanded in content and readership from the *Metropolitan Sea Pilot*, which had focused on Paul Siple during the first expedition, Howard confronted the commercial concerns of polar exploration in the private age.

Correspondence in the records of the APS show the fear felt by some in the leadership of the Byrd expedition that reporting by *The Little America Times* would violate the expedition's contracts with other news media. Howard resolved this brief but intense conflict with the support of Admiral Byrd himself. *(See August Horowitz to Mrs. Marie Ames Byrd, October 26, 1933, RG 56.16, box 1, folder 6, The Ohio State University Archives.)*

Howard's experience with *The Little America Times* set the stage for the creation of the American Polar Society. The radio broadcasts from Little America II to the living rooms of Americans brought the voice of an American hero to the ears of many. Byrd's solitary and near-death experience and rescue at Advance Base, a weather station approximately 120 miles away from Little America II, gave the second expedition the drama that the first had with the South Pole flight.

> *Howard's experience with* The Little America Times *set the stage for the creation of the American Polar Society.*

American explorer Lincoln Ellsworth, meanwhile, accomplished the feat of flying across the continent in 1935. Clearly, Antarctica had become an arena for American accom-

Editor's Note: *This article is the first of two installments. It is adapted from a paper of the same title in* Creativity, Lighting the Poles: Collaborative Solutions to Common Problems: Proceedings of the 16th Polar Libraries Colloquy *(Edited by Juli Braund-Allen and Cathie Innes-Taylor, Anchorage: University of Alaska Anchorage Press, 1997, pp. 40-45.)*

plishments in exploration and in science—and Byrd was already planning his third expedition.

Birth of the American Polar Society

August Howard and others saw a need and an opportunity. No government or private agency existed as a central clearing house of information about Antarctica. Something was needed to enable explorers to learn from each other about Antarctica. Private citizens—children as well as adults—who would never become explorers or polar scientists also had no easy way of satisfying their interest in Antarctica, which had been stimulated by the exploits of Byrd, Ellsworth and Wilkins.

In a letter he wrote on July 31, 1934, to American cartographer and historian W.L.G. Joerg *(see RG56.16, box 1, folder 8, The Ohio State University Archives)*, Howard proposed the creation of a privately funded organization to provide information about Antarctica. He noted that public interest was at a fever pitch and there was the likelihood of financial support from the Columbia Broadcasting System, the *New York Times* and Paramount.

> *Howard proposed that President Franklin D. Roosevelt be honorary president and that Byrd and Ellsworth be honorary vice presidents.*

A special polar library, to house information about Antarctica, could be created at either the American Geographical Society or in the American Museum of Natural History (AMNH). Howard proposed that President Franklin D. Roosevelt be honorary president and that Byrd and Ellsworth be honorary vice presidents. The organization would make a special effort to recruit scientists and veterans of polar expeditions as members. In addition, the organization would maintain regular contact with similar organizations elsewhere, including the Scott Polar Research Institute in Cambridge, England; the New Zealand Antarctic Society; and the Arctic Institute of Leningrad.

In Service of Education

Finally, Howard believed that the organization should develop a service for the education of children. He proposed that the society use its library to develop bibliographies and outlines for teachers to instill an interest in geography, history and science in their students. He believed that youngsters could, at an early age, develop a life-long interest in science and polar regions.

On November 29, 1934, notice of the organization of the American Antarctic Society was mailed to potential members. The AMNH offered space for meetings and a mailing address. By January 1, 1935, there were 25 members.

A few months later, Fred Meinholtz of the *New York Times* proposed to change the name from the American Antarctic Society to the American Polar Society. This would expand the range of interest and the numbers of prospective members. At an organizational meeting at the Hotel Barbison in New York City on September 9, 1935, August Howard presided as chair. The name was changed officially to the American Polar Society. At the time, the Society already had 93 members in 25 states and 7 foreign countries. Paul Siple became the first president, and the Society held its first annual meeting on November 25 at the AMNH.

Howard's friendship with Siple and his ties with the newspaper and scientific organizations in New York City were critical to the formation of the APS and *The Polar Times*. By the spring of 1935, Howard had developed agreements with the *New York Times* and the

> *Howard believed that youngsters could, at an early age, develop a life-long interest in science and polar regions.*

North American Newspaper Alliance to receive and reprint newspaper articles concerning polar regions. In September of 1935 the Burrelle Press Clipping Bureau agreed to provide its services for $1 per month. These important agreements assured that *The Polar Times* would have a sufficient number of articles to serve its primary purpose as a central source of information about polar regions. By 1937, Howard had added the Associated Press, United Press International, the *New York Herald Tribune*, and the *London Times* to his recruits of volunteers in the campaign to gather news and information about the poles. ❑

Next Issue: The continuing activities of The American Polar Society and the development of **The Polar Times** ***magazine.***

AMERICAN POLAR SOCIETY
Membership is a great gift!

Society Member Returns Artifacts to Antarctica

by Jeff Rubin

Spurred by an article he read in *The Polar Times*, APS member Ed Phelps has returned a group of artifacts he took from Capt. Robert F. Scott's hut at Cape Evans in 1959, including an 1899 Latin-English book, a 1909 book of short stories, a carved wooden container lid and two extremely hard Huntley and Palmer biscuits.

Mr. Phelps, of Salem, Oregon, said that the idea of returning the items started when he read an article in *The Polar Times* [EDITORS' NOTE: Spring-Summer 2001 issue, page 14] about someone returning a can of cocoa, taken decades ago from a hut in Antarctica, to the Antarctic Heritage Trust (AHT) in New Zealand.

Mr. Phelps contacted AHT executive director Nigel Watson, told him he was planning a visit to New Zealand in March 2002 and asked if the AHT might be interested in the items he had "borrowed" from the Cape Evans hut when he was a supply officer on the *U.S.S. Staten Island* during Deep Freeze IV and the I.G.Y.

"He indicated a great interest, and we arranged a meeting," Mr. Phelps said.

The return of the items generated considerable newspaper interest in New Zealand, with articles (each accompanied by a photo) appearing in the *Christchurch Citizen* (March 15, 2002), the *Christchurch Star* (March 20, 2002), and the *New Zealand Press* (March 15, 2002).

"I treasured the items I had for over 40 years but I was afraid they would be lost after I am gone," Mr. Phelps told *The Polar Times*. "It is satisfying to me to know that they will be returned where they belong."

"Eventually they would have been lost if they stayed in our family," he told the *Christchurch Citizen*, "because no one would know what to do with them."

The Trust intends to return the items to the Ice. ❑

Due South

By Jeff Rubin, Antarctic Editor

Keep the Huts Real

Photo by Jeff Rubin

Shackleton's Hut: The real thing—but for how much longer?

The historic huts of Ross Island, Antarctica, built by British explorers Robert F. Scott and Ernest Shackleton in the first decades of the 1900s, are international treasures. Along with the huts at Cape Adare built by Carsten Borchgrevink in 1899—the first buildings erected on the continent—they are the crown jewels of Antarctica's historic sites. Some even call them hallowed ground.

So it's disappointing and rather alarming to read the plans for Shackleton's hut proposed in the new "Conservation Report" published in March 2003 by the Antarctic Heritage Trust–New Zealand (AHT-NZ), the organization in charge of safeguarding the huts.

Like those of Scott and Borchgrevink, Shackleton's hut at Cape Royds on Ross Island is a fascinating time capsule. As I have written about them in my Antarctica guidebook published by Lonely Planet, "This is the real thing, what you came for, the reason you paid thousands of dollars and suffered through long days of seasickness."

Ironically, that very passage in my book is quoted by Nigel Watson, executive director of AHT-NZ, in his fundraising pitches. Ironic, because what Mr. Watson proposes will replace the "real thing" with replicas.

Yes, the very authenticity that makes the huts so unique will be badly compromised if AHT-NZ's report (price including postage to the U.S.: $41.95) is carried out as planned. This is especially disturbing when one considers the report's own recognition that "the unique quality of the site is its capacity to evoke the spirit of Shackleton's Expedition, and this is what makes it most comprehensible to visitors."

Like all the huts, Cape Royds is showing its age. The explorers who built the huts never intended to occupy them for more than a couple of years, and did not expect them to last much longer. Although they were strongly built to withstand Antarctica's fierce climate, longevity was not among their anticipated qualities.

No wonder, then, that in September 2003 the World Monuments Fund put the Cape Royds hut on its list of "100 Most Endangered Sites."

Over the past century, the huts have filled with wind-blown snow (which then turned to ice), and been dug out. Artifacts and furniture have been arranged and re-arranged. Structural repairs have been made, too: the Cape Royds hut, for example, was re-roofed by AHT-NZ in 1990.

"We need to act to ensure that the huts will still stand for at least another 100 years," Mr. Watson says.

But at Cape Royds, the report now recommends actions that go well beyond what has been done in the past—plans that will effectively destroy the unique ambience of Shackleton's hut, leaving visitors to wonder sadly whether what they are seeing is real or fake.

Shackleton's hut at Cape Royds on Ross Island is a fascinating time capsule.

Among its startling recommendations:

- Rebuild the stables, garage and latrine to their 1909 form by using "up to 380 new storage boxes and up to 48 bales of artificial fodder."
- Reconstruct the cache of stores on the hut's south and east sides to their 1909 form through "the replication of storage boxes (up to 384 and 216 new boxes respectively) [and] the construction of new walls."
- For the last remaining wood-spoked wheel of Shackleton's Arrol-Johnston motor car (Antarctica's first): "replace any missing spokes with timber the same as or close to the original type."
- Remove paper labels from assorted canned provisions, repair tears in the labels, stabilize corrosion on the cans and then re-attach the labels.
- "Replicas will be used where the original artifact is missing, is considered to be too fragile or of unacceptable visual appearance when conserved, is in too poor a condition to be conserved, or is too high a security risk to be placed in the hut....Replicas will be marked 'Replica' in an inconspicuous place, visible on close inspection."

Why must the stables, garage and latrine be rebuilt? What's wrong with a century-old wheel missing a few of its spokes? What need for rusting tin cans to be repaired, or, far worse, replicated? Visitors understand that time changes things, deteriorates them, eventually destroys them.

No one goes to Shackleton's hut expecting to see it set up just the way he left it, especially if it involves building walls of fake boxes and stocking shelves with fake cans of food.

Replicas are wrong. A genuine artifact is a powerful vehicle for taking you back to the past: "These are the actual cans of food that Shackleton and his men would have eaten. This is the very stove on which they cooked. These are the rough wooden bunks where they slept."

A fake takes you nowhere except disappointment.

Mr. Watson and his team of conservators, historians, engineers and architects seem, on one level, to understand this.

"We want to go to all lengths of authenticity," Mr. Watson says. "For example, by using wood species that were used in the actual construction. We need to do it in a careful way to ensure that it is authentic."

But this misses the point. No matter how carefully a replica is made, it's still a fake.

Although I have long and actively advocated the preservation of the huts and the return of

the artifacts taken from them, I'd rather see them deteriorate naturally than become a shiny Disney version of the huts, "re-creations" with costumed interpreters describing how things once were. (This report, carried to its logical extreme, might have a bearded "Shackleton" in fake-vintage clothes bounding out of the hut to greet visitors!)

"There is no desire to create a Disneyland experience," Mr. Watson insists. "What we are faced with is some tough decisions to preserve what's there for the next 100 years."

"We know that people make a great deal of effort to visit the huts," he adds. "We don't want to devalue that experience. But the Trust's mandate is the conservation of the huts and the artifacts. It's not about enhancing the visitor experience."

Before AHT-NZ tries to raise and spend the many millions of dollars required for this proposed repair and replication, it should reconsider the appropriateness of some of these recommendations.

No one goes to Shackleton's hut expecting to see it set up just the way he left it, especially if it involves building walls of fake boxes and stocking shelves with fake cans of food.

Go ahead and restore and maintain where necessary. If the roof leaks or the walls let in drift—by all means, fix them.

As a last resort, the Trust might even be forced to follow the lead of other museums and historic homes and install clear Plexiglas walls to protect the huts and their contents.

But no replicas, please. Keep the huts real.

AHT-NZ is currently developing conservation plans for Scott's two Ross Island huts, at Hut Point and at Cape Evans, followed by one for Borchgrevink's hut at Cape Adare after that.

To express views on the huts' preservation, write to Mr. Watson via email at <n.watson.aht@antarcticanz.govt.nz> or via postal mail at Private Bag 4745, Christchurch, New Zealand.

* * * * *

Though I disagree with some of AHT-NZ's plans for Cape Royds, I strongly support the preservation of the huts and their contents.

One way that American Polar Society members can aid this effort is by returning artifacts which they may have collected during earlier visits to the huts.

On Page 7 of this issue, we detail the return by APS member Ed Phelps of two books and two biscuits to the Trust, an act spurred by reading a story in *The Polar Times.*

If any APS member has artifacts he or she wishes to restore to their rightful place, the Society will be happy to act as a go-between with the Antarctic Heritage Trust.

As Mr. Phelps said of his artifacts, "Eventually they would have been lost if they stayed in our family, because no one would know what to do with them."

Don't let that happen to yours. ❑

PHOTO BY JEFF RUBIN

Hallowed Ground: Deteriorating provisions cases (not replicas) outside the hut at Cape Royds.

As Antarctic Tourism Grows, So Do Concerns

***St. Louis Post-Dispatch*, WASHINGTON, 27 December 2002, by Bill Lambrecht**—Along the volcanic shores of Antarctica's Deception Island, a tourist ship operated by Clipper Cruise Line ran aground last month, a relatively minor incident remedied when a Chilean icebreaker came to the rescue.

But it was the third problem the Clipper Adventurer has encountered in recent years in Antarctica. And an advocacy group devoted to protecting the Antarctic environment says the grounding and other mishaps like it point to the need for regulations governing the continent's burgeoning tourism, which has increased six-fold in the last decade.

"The fact that in a place as well mapped as Deception Island a ship still ran aground is disturbing," said Josh Stevens, spokesman for the Washington-based Antarctica Project, the only environmental advocacy group focused solely on Antarctica. "By no means are we saying they were negligent and we have no interest in ending tourism. We just want to make sure that before these places become too damaged to fix, there is a system in place for regulation."

Doug Bolnick, a spokesman for Clipper, played down the incident. He said the problem occurred when the ship's anchor didn't hold and it drifted onto a sandbar. "No one was ever in any danger. The ground wasn't harmed; the environment wasn't harmed. It's just an unfortunate thing that happened." Bolnick said that his company's "No. 1 goal is that people learn a little bit more about the region and that they respect the environment."

The 122-passenger Clipper Adventurer began operating for Clipper Cruise Line in 1998. A year later, it reported two incidents in Antarctica: In one it broke a propeller in heavy ice and in the other it became lodged in ice floes and had to be rescued by an Argentinian icebreaker.

Such incidents are reported to the International Association of Antarctica Tour Operators (IAATO). While no major accidents have been reported by companies in the past decade, one ship injured a humpback whale in a collision two years ago.

Denise Landau, IAATO's executive director, said that companies strictly regulate themselves while in Antarctica and adhere to American environmental laws as well.

She said of the Antarctica Project: "They hate tourism and they capitalize on anything they can to nail us. Things happen in Antarctica, with winds whipping off the glaciers. It's a wicked place."

The Antarctica Project represents more than 200 environmental groups around the world and is an official participant at the annual Antarctic Treaty consultative meeting, where the environment, tourism and other issues are considered.

The group's Josh Stevens said his organization wants limits on tourism. Next year, about 15,000 tourists are expected to descend upon the continent; in 1992 just 2,500 ventured there.

Joe Montgomery, an official with the Environmental Protection Agency in Washington, examines documents prepared in advance by tour companies describing trips to Antarctica and potential environmental impact. He said he thinks that most countries believe the self-regulatory system is working but that he has heard concerns from some about the long-term effects of tourism. ❑

[EDITOR'S NOTE: This story has been abridged from its original version.]

Antarctic Notes

edited by Jeff Rubin

Antarctic Meteorites Offer Extinction Clues

The New York Times*, 21 November 2003, by Kenneth Chang**—About three dozen minuscule shards of rock found in Antarctica may be the fragments of a meteor that killed most life on Earth 250 million years ago, scientists say. The shards bolster theories that meteors caused several mass extinctions. Scientists generally agree that the most recent major mass extinction, 65 million years ago, which killed off the dinosaurs, was caused when a meteor struck near Mexico's Yucatán Peninsula. Writing in today's issue of Science, the researchers, led by Dr. Asish R. Basu, a professor of earth and environmental sciences at the University of Rochester, report that they found the meteorite fragments in rocks in Antarctica dating from the Permian-Triassic boundary. The mineral composition of the fragments, each less than half a millimeter wide, correspond to that of certain meteorites and is like nothing found naturally on Earth. ❑ ***(cb Billy-Ace Baker)

New Antarctic Postcodes

***Deutsche Presse-Agentur*, LONDON, 19 May 2003**—After years of misdirected mail, residents of the Falkland Islands will get their own post code (FIQQ 1ZZ), the British Foreign Office announced Monday. South Georgia and the South Sandwich Islands have also received a postcode (SIQQ 1ZZ), as has the British Antarctic Territory (BIQQ 1ZZ). Residents can now shop on the Internet, from which they were formerly excluded. Said a Falklands spokeswoman: "When you say you don't have a postcode, companies, particularly American ones, don't believe you...then your order is rejected." ❑

Leopard Seal Kills Diver

***British Antarctic Survey (BAS)* press release, 23 July 2003**—It is with the deepest sorrow that BAS reports the death of a marine biologist at Rothera station yesterday. Kirsty Margot Brown, 28, was attacked without warning by a leopard seal while she was snorkelling at her study site in the bay adjacent to the station. She was with her snorkelling 'buddy' when the seal pulled her underwater and contact with her was lost. The two-person shore-cover team saw the incident, and a rescue boat was launched immediately in an attempt to save her. Her colleagues were able to pull her from the water and begin resuscitation procedures in the boat while transferring her to the research station. Despite carrying out CPR for one hour, the station doctor and colleagues were unable to revive her. ❑

Explaining Antarctica's Blood Falls

***Ohio State Research News*, COLUMBUS, 4 November 2003, by Earle Holland**—Ohio State University scientists have discovered that a mysterious reddish stain seeping out from halfway up the face of the Taylor Glacier in Antarctica's Dry Valleys is probably the last remnant of an ancient salt-water lake. The lake formed as long as 5 million years ago when sea levels were higher and the ocean reached far inland. They reported their conclusions today at the annual meeting of the Geological Society of America in Seattle. Geologist Griffith Taylor first found the red discoloration in 1911. During the mid-1960s, University of Wisconsin scientist Robert Black discovered that the reddish stain was iron salts, or ferric hydroxide, being squeezed out of the ice sheet. The phenomenon came to be called Blood Falls and its origin has puzzled researchers ever since. Berry Lyons, a professor of geological sciences and director of O.S.U.'s Byrd Polar Research Center, led a team that analyzed samples of the discharge over a 10-year period. Their analysis suggests that the reddish salts were deposits formed at the site of an ancient lakebed when the ocean receded from the valley.

Photos may be found at http://researchnews.osu.edu/archive/bloodfallspics.htm and http://huey.colorado.edu/77DegreesSouth/spooky3.html ❑

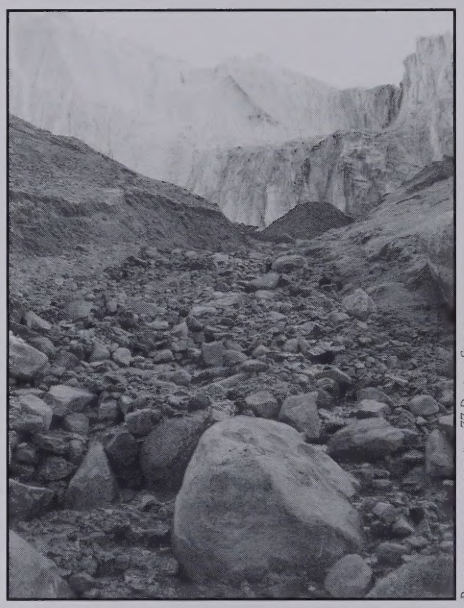


PHOTO FROM ONLINE MAGAZINE *77 DEGREES SOUTH*.

Blood Falls is the darkened area in the low right-center of the background cliffs.

Estonia's Antarctic Plans

***New Zealand Herald*, 28 July 2003, by Simon Collins**—Estonia wants to build a summer-only research base near a protected area in the Ross Sea region, proposing a small base for six people, comprising two 5m by 5m huts, a small shed and fuel storage. Its suggested site is Edmonson Point South, close to an Italian outpost 350km northwest of New Zealand's Scott Base, and within one kilometer of an area which Italy has proposed for special protection. ❑

Vostok Water's Oxygen Fizz

NASA-Ames News Release, 11 August 2003—Water released from Lake Vostok, 4km beneath the Antarctic ice sheet, could gush like a popped can of soda if not contained, opening the lake to possible contamination and posing a potential health hazard to researchers. Scientists recently found that concentrations of dissolved gas in the lake water were much higher than expected, measuring 2.5 liters of nitrogen and oxygen per kilogram of water. This high ratio of gases trapped under the ice, they said, will cause a forceful "fizz" when the water is released. They also expect oxygen levels in the lake water to be 50 times higher than those in ordinary freshwater lakes on Earth. ❑

Tides Control Ice Stream Flow

Goddard Space Flight Center press release, 22 August 2003—New research suggests that tides are responsible for the unusual pattern of motion exhibited by Antarctic ice streams, including Whillans Ice Stream, which actually stops dead and then slips for a short time, moving large distances, before it stops again. "The fact that such a huge lumbering river of ice can be stopped by a one-meter change in the tide underscores how delicate the balance of forces is at the edge within the ice sheet," said glaciologist Robert Bindschadler, lead author of the study, published in today's issue of *Science*. ❑

Search for South Pole Hero

BBC, 25 August 2003, by Bruce Whitehead—Norway is considering sending a submarine to search the Arctic seabed for the wreck of a seaplane in which the explorer Roald Amundsen, first to reach the South Pole in 1911, is believed to have died in 1928. The Norwegian fisheries minister said he would personally bring pressure for a search as soon as possible. Amundsen's plane is thought to have crashed near Bear Island in about 100m of water. Earlier this year, a chart was discovered from a Norwegian fishing boat, marking the spot where in 1933 it had snared a 3m object—possibly from the plane's wing. Recently, a retired Norwegian seal-hunter recalled how he had used a piece of driftwood—perhaps part of the plane—in 1964 to repair a hut on a remote island, 1,200 km from the North Pole. ❑

Ailing South Pole Worker Home

***The Associated Press*, CENTENNIAL, Colo., 23 September 2003**—An ailing worker rescued from the South Pole over the weekend was back in the U.S. on Tuesday, Raytheon officials said. The man, whose name and condition have been withheld at his request, will require surgery for a potentially life-threatening problem. He was rescued by Canadian pilots Sunday, the third such rescue in four years. ❑

Antarctic Ozone Hole Near Record

***Sydney Morning Herald*, 23 September 2003**—The ozone hole over Antarctica is at a near record size this year, a New Zealand scientist said today. Dr. Stephen Wood of New Zealand's National Institute of Water and Atmospheric Research, in Antarctica studying the ozone hole, said it was currently about 27 million sq. km, almost four times the size of Australia. He said the seasonal phenomenon had developed earlier than usual this spring but had shrunk a little after threatening to match the record of 30 million sq. km set in 2000. ❑

Big Berg Wreaks Havoc

***Stanford Report*, 2 October 2003, by Mark Shwartz**—For the second time in 26 months, a massive iceberg has clogged a large portion of the Ross Sea, causing what could turn out to be a devastating loss of penguins and other marine life, Stanford scientists say. Reduced phytoplankton production in the Ross Sea, a result of unusually large amounts of sea ice, spells trouble for Adélie penguins, the scientists say, and was likely caused by C-19, an iceberg nearly twice as big as Rhode Island. The March 2000 calving of B-15, the largest berg ever recorded, caused local Adélie populations to drop sharply in 2000 and 2001. ❑

Penguins' Polynya Plankton Picnics

Goddard Space Flight Center online, 7 October 2003—New research has found a strong association between the well being of Adélie penguin populations and the productivity of plankton in polynyas, pools of open water in sea ice which provide ideal conditions for phytoplankton blooms. These blooms

(CONTINUED AT LOWER RIGHT)

Farewell To The Explorers, Hello to the 'Extreme Tourists'

EDITOR'S NOTE: Below we publish excerpts from three stories that underline the fact that many visitors to Antarctica who call themselves "explorers" these days are mere tourists, albeit "extreme" tourists. Some are dangerously foolish, which is why governments operating in Antarctica are increasingly concerned about them.

Great Scott! Whatever Has Happened To Our Spirit Of Adventure?

The Independent, **5 January 2003, by Stephen Goodwin**—How different Capt. Robert F. Scott's anguished South Pole diary entry—"Great God! This is an awful place..."—sounds compared to the messages from Antarctica last week as first a London finance director and then a young Scout leader rewrote the polar record book.

Youthful faces beamed out of our TVs from Antarctica, telling us excitedly that the temperature was minus 30C, while champagne corks popped. "Absolutely fantastic," enthused 23-year-old Andrew Cooney, live from the Pole.

The South Pole has become a commercial circus in much the stamp of Everest. And while the stamina and fortitude of the polar trekkers is not in doubt, is it really an adventure in any meaningful sense? Hauling a sledge for weeks on end is a tough game but today there is the comfort of knowing your guide can call up an air taxi if something goes wrong.

A week ago Tom Avery, 27, who works for a ski company, became the youngest Briton to walk to the South Pole. Five days later along came Andrew Cooney to take the world title—the youngest man ever to reach the South Pole on foot. Both were in parties with professional guides.

Meanwhile, two men from Northern Ireland were attempting to break some kind of record by "sledging" on specially designed ski-buggies towed by kites; a British father and son are still hoping to become the first insulin-dependent diabetics to reach the pole on foot; and a polar guide is testing a fat-tyre bicycle for a solo ride to you know where.

Technology has enabled us to tread in the footsteps of polar heroes without taking on as much risk. Adventure is, or was, defined as a hazardous undertaking in which the outcome is uncertain. But today the thermostat of tolerable hazard has been turned down and Westerners expect to be nannied.

To attract national media publicity requires the celebrity draw of Everest or either pole and preferably an attention grabbing gimmick of the youngest/oldest or "last great challenge" sort. Last week "Bear" (his real name is Rupert) Grylls displayed the inflatable boat in which he and four crewmates intend to cross from Nova Scotia to Scotland, via the Arctic Circle. It is being sold as "the last great ocean adventure".

Mr Grylls, 28, became the youngest Englishman to climb Everest in 1998. He includes in his achievements rowing 22 miles down the Thames naked in a tub. Now there's a thought for Mr Grylls: how about walking to the pole naked? ❑

No Wonder They Call It the Bottom of the World

The New York Times, **5 Jan. 2003, by James Gorman**—Nowhere has the historical slide from tragedy to farce been more pronounced than on the icy continent of Antarctica.

In the great days of Antarctic exploration Robert Falcon Scott, Roald Amundsen and Ernest Henry Shackleton made extraordinary journeys that seemed, somehow, to be more brave than foolish. It may have been hard to understand the practical benefits of getting to the South Pole first, but anytime you end up in a situation that calls for stoic death or stoic eating of sled dogs, it has to be serious.

Lately, however, the attempt to rack up Antarctic firsts seems to have gotten out of hand. First, a 27-year-old became the youngest person to walk to the pole a week ago. But a 23-year-old was hot on his heels. Also on their way were a father-son team aiming to be the first diabetics to walk to the pole, the first father-son team, and the oldest man (the father), at age 60.

Regrettably, in what was most emphatically not a Monty Python skit, a pair of Irishmen gave up their attempt to get to the pole with sledges pulled by very large kites.

It seems that when the real frontiers disappear, people can't help making up absurd new ones. One may deplore this marriage of comedy and danger as the Fear Factor approach to exploration. But given the tendency of everything to get much worse than anyone could have imagined, and faster, more such efforts are bound to come. ❑

Taxpayer Gets Rescue Bill As Helicopter Duo Plucked From Life Raft After Antarctic Crash

The Guardian, **28 January 2003, by Steven Morris**—A new adventure undertaken by Britons Steve Brooks and Quentin Smith almost led to tragedy yesterday when their helicopter plunged into the sea 36 miles north of Smith Island in the South Shetlands.

The men were plucked from the icy water by a Chilean naval vessel after a nine-hour rescue which began when Mr. Brooks contacted his wife, Jo Vestey, on his satellite phone asking for assistance. The rescue involved the Royal Navy, the RAF and British coastguards.

Last night there was resentment in some quarters that the adventure had cost the taxpayers of Britain and Chile tens of thousands of pounds.

Experts questioned the wisdom of taking a single-engine helicopter into such a hostile environment.

Ms. Vestey claimed she did not know what the pair were up to, describing them as "boys messing about with a helicopter."

Mr. Brooks called his wife in London on his satellite phone. Meanwhile, distress signals were being beamed from the ditched helicopter and from Mr. Brooks' Breitling emergency watch.

The Royal Navy's *HMS Endurance*, which was 180 miles away, began steaming towards the scene and dispatched its two Lynx helicopters. One was driven back by poor visibility but the second was on its way when the men were picked up.

Last night the men were on their way to the Chilean naval base Eduardo Frei, where *HMS Endurance* was to pick them up. Ms. Vestey said: "I don't know what will happen to them once they have been picked up by *HMS Endurance* —they'll probably have their bottoms kicked and be sent home the long way." ❑

(CONTINUED FROM PREVIOUS PAGE)

feed krill, which in turn are eaten by penguins, seabirds, seals and whales. Although relatively small in area, coastal polynyas play a disproportionately important role: taken together, the polynyas were responsible for more than 75% of total plankton production, the researchers found. In eastern Antarctica, more than 90% of all Adélie colonies live next to coastal polynyas. ❑

Doorway to the Pack Ice

***Sydney Morning Herald*, 9 October 2003, by Andrew Darby**—Australian research indicates that polynyas may act as doorways to the pack ice zone beyond. While a recent Stanford University study found that more productive polynyas supported larger penguin populations, work by the Australian Antarctic Division with satellite-tracked Adélies indicates they see polynyas not as a constant food source, but an easy way into the food-rich pack ice. "Adélies make straight for the polynya, and they will start feeding around the sea ice in its outer boundary," said Dr. Knowles Kerry. "But it's the open water they want, rather than what's in it...They spend their time in the pack ice." The picture is less clear for emperor penguins, which breed in winter, a time when polynyas could save them days of travel. The division's Dr. Barbara Wienecke said emperors near the French Dumont d'Urville base headed straight towards polynyas in winter; but others near Mawson did not seem to use them at all. ❑

The Ice Is Only Safe Vacation Spot

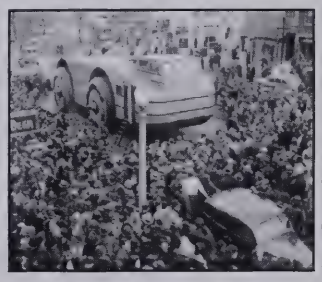
www.mirror.co.uk, 17 October 2003, by Oonagh Blackman and Gary Jones—Britain's top spy boss last night warned that terrorism is such a threat that the only safe place for a holiday is the South Pole. MI5 chief Eliza Manningham-Buller said the risk to the UK from Islamic terrorists will stay high for at least five years, adding: "I recall reading one gloomy [Joint Intelligence Committee] paper on the threat, after which a colleague said 'Holidays only safe in Antarctica then'." ❑

Erebus Enzyme Offers DNA Test

www.stuff.co.nz, 3 November 2003—Researchers expect soon to start producing commercial quantities of a faster DNA-testing technique that promises to reduce crime-solving delays. Based on an enzyme in a micro-organism found at a volcanic vent on Antarctica's Mt. Erebus, the automated method involves only one step to extract DNA from a crime-scene sample of hair or other material. The existing manual method requires 20 steps and takes far longer. ❑

Fate of Snow Cruiser Surfaces

*Following are reader responses to queries on the whereabouts of the Snow Cruiser (***The Polar Times,** *Spring-Summer 2003, p. 28.)*



AKRON BEACON JOURNAL FILE PHOTO

You asked anyone who could shed light on the eventual disposition of the Snow Cruiser to write. Dr. Dean Freitag and I wrote an article for the *Polar Record,* Vol. 23 No 143, May 1986, pages 129-141, called "Dr. Poulter's Antarctic Snow Cruiser." We think that we researched it pretty well, as a lot of the people involved were still alive when we started, Poulter and Wade in particular. It was last seen during the IGY when a tunnel was dug down to it. But an ice breaker saw parts of Little America exposed on the seaward face of the ice shelf in the early 1960s, so certainly the Snow Cruiser is on the bottom of the Ross Sea or, at most, the Pacific. Although it was designed to float, it couldn't have been watertight after more than 20 years buried in the Ross Ice.

Steve Dibbern
Crozet, Va.

I was technical director of the U.S. Army Corps of Engineers Cold Regions Research and Engineering Laboratory (CRREL) from 1972 to 1981. I had previously been in charge of the Army's Mobility Research Center at Vicksburg, Miss., doing research on the mechanics of vehicular travel over soft soils. I was intrigued by the opportunity to combine both of my technical interests by writing a review of the Snow Cruiser's history. While doing some background study I discovered that another man, Steve Dibbern of the Foreign Science and Technology Center, was also on the same path. After comparing notes and objectives we decided to collaborate in writing a paper. We finally got it done and published in the journal *Polar Record, 23(143)* 1986. The paper is entitled "Dr. Poulter's Antarctic Snow Cruiser." The paper deals with the origin of the idea, its design and construction and a report of its performance "on the ice." We offered an opinion as to the reasons for its lack of mobility. We also made note of its fate in a paragraph as follows:

"The Snow Cruiser was rediscovered during the International Geophysical Year (1958-59) operations by the United States at the Bay of Whales, and records then recovered were sent to the US National Archives. It narrowly escaped when a portion of the ice shelf carrying IGY camps Little America IV and V broke off and drifted away shortly afterwards. Its departure occurred sometime in the 1960s, when another large portion broke away and drifted out to sea. Undoubtedly Dr. Poulter's Snow Cruiser in now at the bottom of the Southern Ocean."

Dean R. Freitag

The Snow Cruiser was deeply buried by drifting snow at Little America III (1939-1941). I wintered-over at Little America V during the IGY years of 1957-58 as a member of the Navy's VX-6 Little America V Detachment (no "E" in the designation then).

We flew the Navy R4D-5s (DC-3) out of LA V. The aircraft galley consisted of a hot plate, primarily there to brew coffee...but it also was used to cook steaks and such on the longer flights. A good plane captain was also a good chef! On occasion we would fly over to the LA III site to pick up frozen steaks and other foodstuffs left there when the base was abandoned in 1941.

At LA III, there were one or two radio antennas just breaking the surface of the ice which were the markers for us. As I remember, we went down a shaft on a makeshift wooden ladder, nothing fancy, looked like scrap lumber put together. The shaft was roomy enough. How deep? I would think at least 15 to 20 feet. A flashlight was needed once you got under the ice.

The passageway supports were made up of crates, drums and boxes of supplies, much like we had at LA V. One day I did see a sextant that I wish to this day I had picked up. However, my boss properly advised me to leave it be. I don't recall any other personal effects. We didn't go deep into the camp, just the immediate vicinity of the entry point. We would locate the steak boxes, King Crab canned goods (from Japan) and other goodies, chip them out of the ice and bring them to the surface. They were still in outstanding condition, therefore we ate very well.

Someone knew of the Snow Cruiser location, so we went inside a few times. You could see a small portion of the Snow Cruiser exterior. Typical of long-abandoned items in that climate, the interior was pretty well covered with ice crystals. As I remember there were very few instruments in the cab, and the interior was basically bare except that the after-end was littered with these envelopes that were to be used to commemorate their journey. The very fine print reads "Research Foundation of the Armour Institute of Technology."

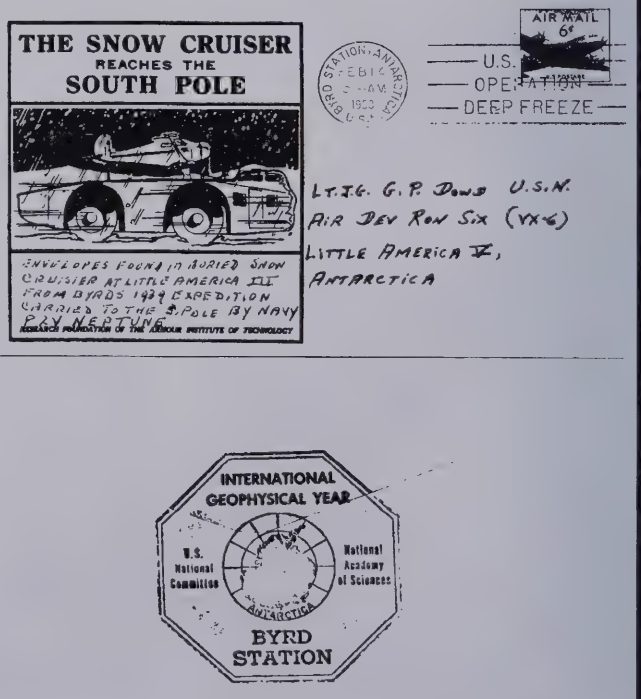
We picked up some and had them carried to Pole and back. The printing on the envelope reads: "Envelopes found in buried Snow Cruiser at Little America III from Byrd's 1939 Expedition. Carried to the Pole by Navy P2V Neptune." Postmarked at Byrd Station Antarctica at 5 AM FEB 14, 1958. The envelope has a Byrd Station IGY cachet on the back.

Naval Aviation News, some years ago, published pictures of LA IV Station adrift after the ice shelf had calved. Clearly visible on this large berg were the R4D aircraft flown in from the *USS Philippine Sea* in January 1947 and later abandoned with the station at the completion of Operation Highjump. I would assume that the Snow Cruiser and the LA III site met a similar fate.

I think the "Massive Road Hog" article should have stated that Dr. Poulter rescued Adm. Byrd from the "Advance Base," not the Pole. Keep up the great work on *The Polar Times*. I'm looking forward to the next issue.

Captain Gregory P. Dowd USN (Ret)
Mt Pleasant Mills, Pa.

***EDITOR'S NOTE:** Capt. Dowd is, of course, correct: Admiral Byrd was living alone at Advance Base, not the South Pole, when he required assistance.*

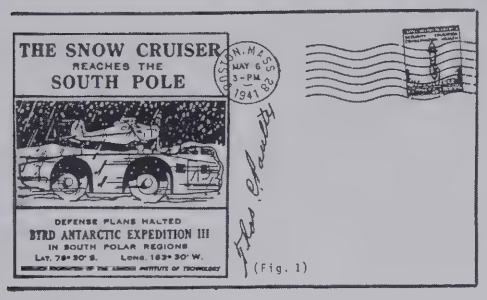


Front and back of envelope found in buried Snow Cruiser at Little America III from Byrd's 1939 Expedition. Carried to the Pole by Navy P2V Neptune" Postmarked at Byrd Station Antarctica at 5 AM FEB 14, 1958.

COURTESY CAPTAIN GREGORY P. DOWD USN (RET)

More 'Snow Cruiser Cachets'

APS member Hal Vogel provides cachet cover reprints from Jan.-Feb. 1980 edition of Ice Cap News.



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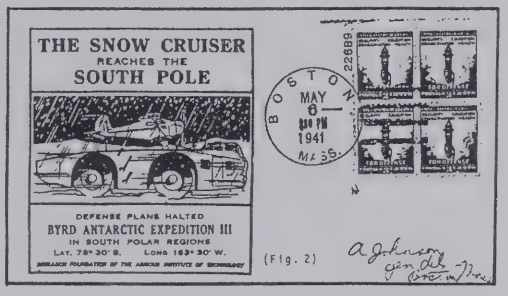

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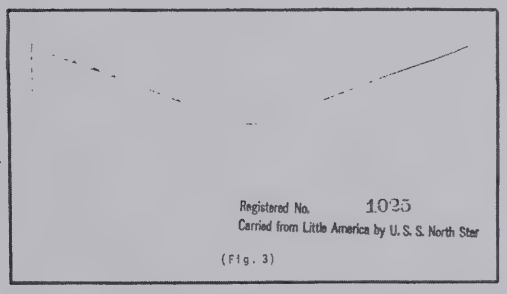

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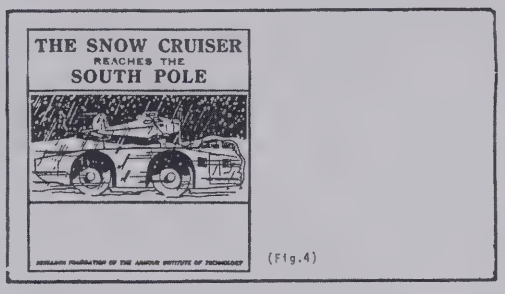

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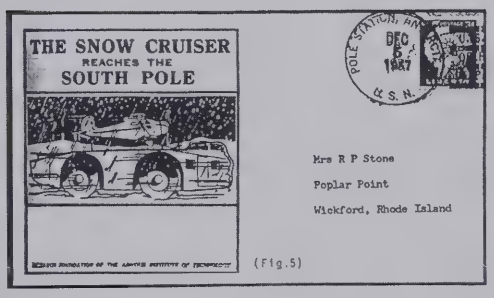

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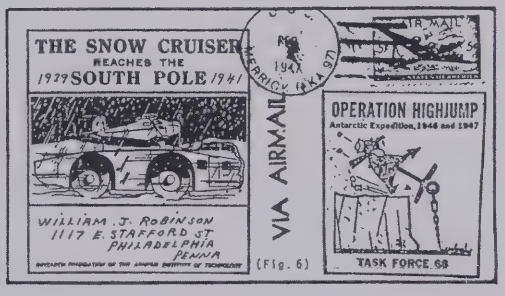

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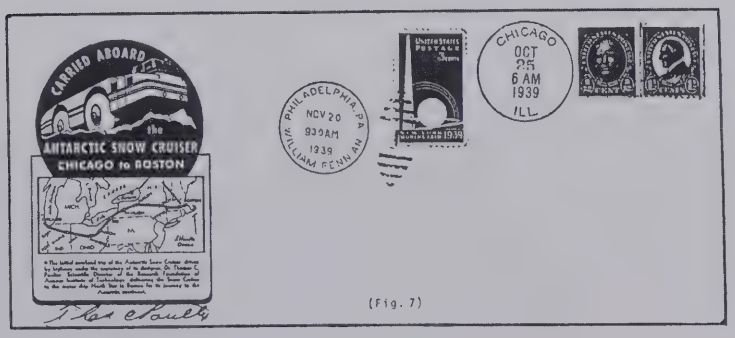
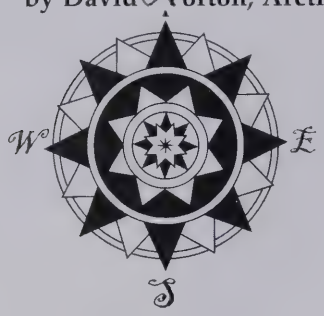


(Fig. 7)

Due North

by David Norton, Arctic Editor



Atonement, Shoemaker Style

Do you cringe at the misuse of a word? Events during the October 2003 American Polar Society Symposium—"Women's Roles in Polar Regions"— almost led me to misuse a word after realizing that I had committed an oversight. No, it wasn't an expletive (I strive to use expletives "correctly"). Rather, while returning to Alaska, I rehearsed asking a woman colleague's forgiveness for my oversight. "Atonement" came to mind, as in expiating guilt. Fortunately, before compounding my error, I researched that word's full history and meaning. Here's the story:

At about the time this column appears, the December 2003 issue of *Arctic* will publish an article bearing my name as second author. The article reviews baffling inconsistencies shown by two marine organisms that scientists have sought since the 1940s in the Chukchi Sea and western Beaufort Sea off Arctic Alaska. We authors tried and rejected many explanations for the relative abundance recently of blue mussels (*Mytilus*) in Arctic localities, where they had rarely been reported previously. Our review persuaded us that two organisms, *Mytilus* and associated kelp, or "seaweed" (*Laminaria*) must have lived there all along, so we came to believe that until the 1990s observers tended to look in the wrong places, using the wrong methods, armed with the wrong expectations.

With extensive sleuthing and help from other scientists, we authors managed to glean further tidbits of evidence from unpublished sources. These tidbits supported our contention that *Mytilus* and *Laminaria* have lived in near-shore shallow waters near Barrow in small numbers throughout the last 50 years. Even farther back, mussels were widespread in the Arctic soon after the Bering Strait opened 10,000 years ago. A few incomplete specimens here and there, a couple of unpublished reports and some fossil corroboration from Alaska and distant Canadian Arctic studies, however, fell short of fully vindicating our ideas. Divers' accounts or photographs, on the other hand, would be a "gotcha."

After the final APS symposium session, Dr. Rita Horner of Seattle and I chatted about our experiences connected with the former Naval Arctic Research Laboratory (NARL) at Barrow, Alaska. Because Dr. Horner's presentation to the APS Symposium discussed pioneering diving that her field assistants carried out near Barrow in the early 1970s, I asked her whether her divers found kelp, mussels, or both. She was certain that they had found kelp beds, but less sure about *Mytilus*. Good grief! If only we had thought to ask Rita, she might have given us the perfect clincher for our Arctic manuscript!

Dr. Horner offered to share her slide collection, in which a number of underwater photographs of marine biota taken during the SCUBA divers' explorations near Barrow could buttress our arguments. In view of her familiarity with the region, its biota, and mutual friendships, I could not explain why Rita should be as unaware of our decade-long pursuit of kelp and mussel evidence as we were of her divers' early exploits. Rita is one of the few marine biologists we had not consulted during the preparation of our review article.

With growing dismay, I realized that Dr. Horner had not attended the 1997 Symposium at Barrow that celebrated the 50th Anniversary of the NARL. Worse, as editor, I failed subsequently to invite her to help chronicle the laboratory's first half-century[1]. How had she been overlooked? Was this a case of modern gender inequity in Arctic science? The more I pondered, the heavier my burden of atonement appeared.

Back home, I promptly looked in archived files for Dr. Horner's name on the original invitation list for the 1997 NARL symposium at Barrow. She wasn't there. Although I could have fixed that after my return from a Sabbatical Assignment in Canada in 1997, I failed to notice the oversight in the few weeks remaining before the symposium.

The NARL circle had apparently lost track of Rita in her new non-Arctic career. Thus, her story matched my own experience of "disorientation" during which I discovered that younger researchers in my field of dissertation research had lost track of my 30-year-old contributions[2]. These days, it is all too easy for an individual not allied with a research team or a large institution to drop from the circle of friendship and communication that unites active polar scholars.

Parenthetically, this is precisely where Brian Shoemaker's genius comes into play. He excels at uniting diverse folk across barriers of time, age, space, gender and institutions. Whether or not Captain Shoemaker directly crafted the recent APS symposium, his skill in recalling people's accomplishments and his valuing every individual's contributions remains a powerful tonic within the American Polar Society. Any organization with ambitious scope in geography and time should cultivate its "Shoemaker" and hope to be as well served as is the APS. With microphone in hand, Brian's introductions of speakers and awardees at the APS banquet were inspiring. Few if any people can rival him at overcoming the centrifugal forces that separate friends and colleagues.

Rita herself dismissed our ignoring the achievements of her divers. Perhaps she sensed that we would have done ANYTHING to strengthen our published arguments. She took no offence from what some women might have ascribed to the exclusive "old boy network." Instead, she assumed that we were unaware of her work supervising scientific SCUBA diving in the Arctic because her other Arctic research was better known.

Much as I regret Dr. Horner's omission from the NARL 50th Anniversary book, gender insensitivity was not a factor; modern haste and faulty memory were. To conclude this story, a little research into word origins showed me that one of the several alternative meanings of "atone" makes more sense than "expiating guilt." Archaically, in Middle English, "at" + "on" (or "one") were combined in the sense of "to make whole (again)." It helps me to think of atonement (at-one-ment) in terms of a Native American figure of speech, "mending the circle." Isn't that what we strive for, after all? Another meaning in Captain Shoemaker's style would be "nurturing the collective memory." ❑

(Continued from right, P. 15)

the snow season of 2002-'03 might be curtailed by yet another month—meaning that a total of three out of six normal months of winter recreation would have melted or washed out. Luckily, a reprieve of cooler weather and more snow rescued us in March 2003. This litany of hand wringing could continue.

However inconvenient to a recreational lifestyle the loss of half a winter may be, we do not have as serious grounds for complaint as some of Alaska's and Canada's indigenous communities. At the Seattle meetings, Caleb Pungowiyi of Kotzebue, Alaska, described his family's forlorn hopes that the strange seasonal patterns of weather and of fish and wildlife movements will "spring back" to normal some day soon. Until or unless they do, fishers and hunters find environmental patterns less predictable and success more elusive. Sheila Watt-Cloutier of the Inuit Circumpolar Conference and a resident of Iqaluit, Nunavut, Canada, explored the dire political consequences of unmitigated change. One simply must hope that the thousands of indigenous high latitude residents of the North will not be discouraged, and will not give up on their subsistence, or habits of living off the natural local resources. To the extent that they do abandon traditional lifestyles, we risk losing much of the traditional knowledge, or practical natural history, of the Arctic. Other forms of natural history, as Dr. Akasofu warns, is no longer sought from within the scientific community. ❑

Connecting the Global Logic to Experience at Local Scales

by Dave Norton

The winter issue of *The Polar Times* a year ago featured global climate change, from several perspectives.

This year the National Science Foundation (NSF), scientific investigators, observers and Arctic- minded colleagues from a dozen nations, and the media staged one of the highest profile scientific meetings of recent years in Seattle at the end of October 2003. Some 450 attendees were exposed to 100 oral presentations and another 200 poster presentations over the four-day "open science" meeting. Print and broadcast media chronicled the meetings: the central focus of these meetings was to come to grips with studying and dealing with environmental changes in the Arctic. The flagship program within NSF was the one whose acronym, SEARCH, stands for "study of environmental Arctic change," and is managed by NSF's Office of Polar Programs. All the big names in high-latitude climate change research were on hand, so for a little name (like mine) it as a heady experience to meet and talk with major architects of concepts and research designs in the various fields of this "hot topic."

Press reports of the meetings appeared under ironic headlines like "Chilling Conclusion: Arctic Is Indeed Warmer" (*USA Today*, Jack Williams, 30 October 2003; see article reprint in this issue, p. 25) but had to relate that the big picture of Arctic climate change is exceedingly difficult to understand for non-scientists, and nearly as difficult for scientists. In relation to the rest of the planet, the Arctic and Antarctic have been likened to Earth's air conditioning systems. Although the meetings presented an overwhelming litany of observations that changes have taken place to virtually every system in the Arctic (hydrology, permafrost, glaciers, sea ice, oceans, land vegetation) there remain unsolved issues of causes of the change, the mechanisms in the atmosphere and oceans which sustain the changes, negative and positive feedbacks, and whether changes are permanent or are even now bouncing back.

The most simplistic line of logic is that burning of fossil fuels has added to the greenhouse gas load in the atmosphere, and that warming atmospheric temperatures are detected earliest in polar regions (canaries of the world's climates—Terry Chapin). Jonathan Overpeck of the University of Arizona was quoted as a proponent of the direct involvement of humans' loading of the atmosphere with greenhouse gases. Jamie Morison of the University of Washington, on the other hand, argues that big changes in the Arctic peaked in the 1990s, and things are now on their way back toward pre-1990s conditions. Rather tha n greenhouse gases or global changes, he links changes in the Arctic to an El Niño-like mechanism in the north called the Arctic Oscillation. Mark Baldwin of Northwest Research Associates in Bellevue WA showed why he believed that the stratosphere above the troposphere plays a highly determinant role in Arctic weather and climate.

Besides oceanographers, meteorologists, biologists, sociologists and anthropologists, the other key researchers participating in Seattle were the simulation modellers. Greg Holloway of the Canadian Department of Fisheries and Oceans in Sidney BC reported on running intercomparisons on 10 General Circulation Models (GCM) for 30 years before and after 1978 to test their performance in tracking and predicting climatic conditions. It would be nearly impossible for any single mortal to understand the entire internal workings of even one of these mathematical simulation models, let alone evaluate the performance of 10 mind-challenging models. But in a real sense, scientists' investiga tions into climate change are being run by these enormous models to an increasing degree. Syun-Ichi Akasofu, Director of the International Arctic Research Centre in Fairbanks addressed the research planning session on the final day of SEARCH meetings, at which he warned participants, "unless our research results can be adopted into GCMs, our research will not be recognized." To put that warning in more human terms, science addressing environment arctic change will exclude all but research conducted by big teams from powerful institutions: individual investigators, natural history observers, and analyses not driven by simulation modelling have no place in future research. For an independent observer living in Subarctic interior Alaska,

Last winter, so little snow fell south of the Alaska Range that the start of the Iditarod Trail Sled Dog Race from Anchorage to Nome had to be moved north to Fairbanks.

Akasofu's is a sweeping, even sobering, dismissal. Except that they were explicitly invited in small numbers to address the SEARCH meeting, what does this mean for indigenous people who reside in the North? Does the SEARCH juggernaut promise to disenfranchise them and their knowledge from science again? Upon returning to Fairbanks, direct observation of environmental arctic change in a sense was hitting everyone in the face—with hammer blows. The transition from considering Arctic change from the distance of Seattle to living in it was almost too much to bear.

Admittedly, we are not good sports—bad losers, in fact. Compared to southern Californians, who lost homes and lives to raging brush fires, Interior Alaskans' gripes about weather seem trivial. All we lost at the beginning of November 2003 was our snow cover. Why should we complain, when much of the world's temperate zone population regards snow as an infrequent nuisance that disrupts orderly commerce?

Several observations may help understand our protective attitude toward winter, which now borders on alarm. Consider that this was the second year in a row that snow has whitened Subarctic landscapes in October, only to be dissipated by a prolonged thaw and rains. The insult was compounded by ice-glazed roads and closures of public schools in November. Many of our sporting neighbours and friends chose to live in Fairbanks because of its notoriously unambiguous winters. For years, we were comfortably spoilt in expecting that any snowflake hitting the ground after the first of October would loyally stay for up to six months as the solid state of water, until melting began in earnest the following April. This meant, in turn, that little or no "down-time" elapsed between stowing canoes and bicycles soon after September Equinox, and pressing cross-country skis into service.

Consider also that September 2002 occasioned the greatest retreat of perennial sea ice northward from Alaska's and Siberia's Arctic coasts since satellite images first documented ice extent in the 1970s. Sea ice in September 2003 barely missed breaking the record for retreat set only a year earlier. Scientists are not certain that these observations are causally related, but we should be forgiven some uneasiness. Then, too, the U.S. and Canadian national Nordic ski teams deserted Fairbanks early in November this year, as the snow they came to use dissolved in the rains. They headed for the mountains of Utah and Alberta, where early snows beckoned. Last winter, so little snow fell south of the Alaska Range that the start of the Iditarod Trail Sled Dog Race from Anchorage to Nome had to be moved north to Fairbanks. Even here at the beginning of March 2003, the thousand-plus dogs in harness started out in a relative heat wave with temperatures at or above freezing. Five weeks earlier, local highway authorities had closed a seasonal ice crossing of the river that runs through Fairbanks for fear thatthinning ice would give way under the weight of a car or pickup truck. That was January, in a town barely 200 miles south of the Arctic Circle, for pity's sake!

Indeed, sufficient snow for dogmushing and skiing had not accumulated in Fairbanks until Christmas Eve in 2002, over two months later than normal. Then toward spring it appeared that

(CONTINUED AT LOWER LEFT, P. 14)

A Grizzly's-Eye View of a Refuge That Oil Drillers Covet

***The New York Times*, Wildlife Refuge, ALASKA, 2 September 2003, by Nicholas D. Kristof**—As I write this, I'm huddled in a tent on the tundra of the wildest part of America, about 175 miles above the Arctic Circle in the last great wilderness virtually untouched by humans other than Eskimos and Indians.

This fate of this wildlife refuge is to be decided by politicians in Washington in perhaps the most contentious debate about the environment today. Supporters of oil drilling make much of the fact that almost none of those who insist on protecting this refuge have ever seen it or ever will, and they sometimes argue that it is a frozen wasteland—even though their own visits consist mostly of staring down through the windows of a plane.

The Arctic refuge is one of the last spots that is pretty much as it was at the time of Lewis and Clark.

So I decided to visit for a week—boots on the ground, or snow—and backpack and raft through this pristine land now up for grabs. Assuming that my satellite-telephone batteries hold out, I'll write about what the land is really like—and, on the way, make up my own mind about drilling.

Most of the terrain in the Arctic refuge is not beautiful in a classical sense. The Brooks Range is spectacular, to be sure, but most of the land in the refuge is not so much pretty as awesome. It is endless stark tundra and mountains, rivers and creeks, with scarcely a tree around.

Above all, this is harsh and inhospitable country. Early yesterday, I stepped out of my tent to find that I was being welcomed into September with flurries of wet snow. The wind blows in from the Arctic Ocean, and in winter the windchill equivalent is often less than 100°F below zero, the point where the charts end. There are no hiking trails here, for only small numbers of humans ever visit, typically in June.

But caribou and bear trails are everywhere. The Arctic refuge is one of the last spots that is pretty much as it was at the time of Lewis and Clark. Still, that can be an argument for drilling. This refuge is so isolated that almost nobody will be on hand to recoil at the sight of oil wells on the tundra. In contrast with more accessible bits of America's outdoors, like the lovely Dome Plateau in Utah, where oil and gas exploration is also proposed, almost the only people who will witness the intrusion of Big Oil will be the wealthiest of tourists, who can afford to charter bush planes.

It's also true that most of the Eskimos who actually live in the refuge favor drilling. They want better schools, better jobs and more comfortable lives, and most believe that oil drilling is the way to achieve that. Some resent the idea that American environmentalists 5,000 miles away want to lock them forever in a quaint wilderness, just for the psychic value of knowing that it is there.

But just south of the refuge, the Gwich'in Indians want to keep the refuge as it is. "Everybody here is against drilling," said Marjorie John, the storekeeper in Arctic Village, a Gwich'in hamlet of 120 people. "We want to protect the caribou calving ground. Those caribou are part of our culture. They are our culture."

Oil drilling, if it happened, would not occur throughout the 19.5-million-acre refuge (about as big as South Carolina), but in a 1.5-million-acre coastal strip. The Gwich'in depend for sustenance on the Porcupine herd's 120,000 caribou, which calve in the coastal area. I understand the Gwich'in fears, but my guess is that the caribou would do fine with drilling.

Above all, this is harsh and inhospitable country.

The caribou herd in the area around Prudhoe Bay, the center of North Slope drilling, has actually expanded, and I spotted two caribou nonchalantly grazing right by Prudhoe Bay—while I haven't seen any caribou since a bush pilot set me down in the refuge on Saturday on a riverside bit of gravel.

And yet! It's hailing now against the side of the tent and my fingers are freezing, but I'm thrilled to be here. This land is the last untouched bit of America, and if we develop it we will have robbed our descendants of the chance ever to see our country as it originally was. There is something deeply moving about backpacking through land where humans are interlopers and bears are kings.

It's hailing now against the side of the tent and my fingers are freezing, but I'm thrilled to be here.

One of those bears, a grizzly, approached as I was preparing lunch, then lumbered away. I'm packing bear spray, a kind of Mace used to fend off grizzlies and polar bears. Walt Audi, a legendary bush pilot here, explained how to use the spray: "If a bear attacks you, just spray yourself in the face, and you won't see it." So it's hard to feel that this a place where humans are in charge. And that is precisely what makes the Arctic refuge so special. ❑

ABOUT OUR CENTERFOLD

***Official U.S. Navy Photo [uncaptioned].* READERS: *Does anyone recognize this site? Please email information to Cliff Bekkedahl, Editor,* cv1957@verizon.net.**

Farthest North Polar Bear

In case you have wondered how far north polar bears go in search of food, a letter in the journal *Arctic* (v. 26, no. 3, Sept. 2003, p. 309) by Rinie van Meurs and John Splettstoesser gives details on an adult polar bear sighted only 13.5 nautical miles from the Geographic North Pole.

The sighting was made from the Russian nuclear icebreaker *Yamal* on 5 August 2001 at 89 deg. 46.5'N, 26 deg. 21.1'E, as determined by the ship's Global Positioning System. While on several cruises to the North Pole by both authors, polar bears are often sighted on the usual route, either from Murmansk, Russia, to the Pole or from Longyearbyen, Svalbard. Stops are often made in Franz Josef Land. As far as can be determined from those who maintain records of polar bear movements, none other has been sighted this far north.

The article mentions that this is probably not unusual if the bears have access to food, such as ringed seals, and there are leads to provide access to them. Both authors have seen ringed seals at the Pole itself, as well as several species of birds (northern fulmars, e.g.). Ice conditions on North Polar cruise tracks exhibit conditions anywhere from 10/10 solid pack, with ice as much as 3 to 4 meters thick, to broken pack with much open water near or at the Pole itself. Measurements of sea ice in the Arctic Ocean in the last few years indicate that the ice distribution is decreasing, as well as ice thickness, perhaps a factor of global warming. Winds and currents can be responsible for relatively rapid ice-cover changes in foraging habitats for polar bears, and the presence of a ship, with its associated noise of icebreaking and its smells, might also attract a bear to the ship's track. ❑

To Big Bears, Alaska Isle Is Paradise On Earth

A Good Life Beachcombing, Salmon Fishing

***Washington Post*, 5 October 2003, by Blaine Harden**—Bears are bigger here. A local male brown bear, fattened up for hibernation, as he would insist on being this time of year, can weigh 1,500 pounds. That's five times the weight of Warren Sapp, the famously beefy defensive tackle for the Tampa Bay Buccaneers.

By local bear standards, Sapp, at 303 pounds and 6 feet 2 inches, is not only skinny, but also short and slow. When bears here get up on their hind legs, as they often do when fishing for salmon in the Karluk River, they stand more than nine feet tall. They can run as fast as 35 miles an hour, much faster than Sapp.

If it seems unsporting to compare a Kodiak bear to an All-Pro NFL tackle, consider that the average local bear—a member of a subspecies that is the world's largest land-based-carnivore—is about twice as big as his much-feared brown bear kin in the Lower 48, popularly called a grizzly.

Also, there is a phenomenal concentration of giant brown bears here on Kodiak Island, which sits out in the Gulf of Alaska. The island has about 2,600 of them—more than twice the total of all grizzlies in the contiguous United States.

Behind all these numbers, there's a good news bear story. Its plot is driven by genetic isolation and ridiculously abundant salmon runs, a terrible oil spill and many decades of enlightened state and federal government actions.

"The biggest bear that ever lived could be alive right now on Kodiak Island because this place is so well managed," said Tim Richardson, executive director of the Kodiak Brown Bear Trust, a nonprofit group that looks out for the bears.

That is almost certainly no exaggeration, since the three largest brown bears ever killed by hunters were shot here. Also, 33 of the 50 largest bears listed by the Boone & Crockett Club—a nonprofit coalition of conservationists and sportsmen—were from Kodiak Island. In recent years, as more visitors are armed with cameras instead of guns, the bear hunt is down, and the bear population is up.

Kodiak bears do not make a habit of attacking, killing or eating people, although they certainly could. They are believed to have killed only two people in the past century. They injure people, usually hunters, about once every two years.

Compared to grizzlies in the Lower 48, Kodiak bears tend to be more predictable, partly because they are better fed.

"I never had a problem with a bear where I didn't start the fight," said Roy Randall, 70, a hunting guide who has tracked Kodiak bears for 40 years and has taken part in 116 kills. (In the Lower 48, grizzlies are listed as endangered, so hunting them is illegal.) Even when Kodiak bears charge at people, it is usually a bluff, Randall said.

"If their ears are erect, then they are going to stop," he said. "If their ears are folded back and you hear their teeth popping as they charge, good gracious, here they come."

The best possible place to begin a bear story here is beside the Karluk River.

Just 21 miles long, this shallow river teems from early spring to late fall with all five species of Pacific salmon, plus steelhead. About 2.3 million wild salmon come home to the Karluk every year, giving it the highest spawning return per linear mile of any river in North America.

Recently, the river, as it flowed out of Karluk Lake, was streaked pale red by tens of thousands of spawning and dying sockeye salmon. During the long salmon season, the Karluk attracts the highest density of bears the world.

It was a Sunday morning in late summer, brunch time, and 15 bears could be seen in and around the river. Near the lake, two adult females splashed, fished, wolfed down sockeye, bluff-charged each other and stood tall in the river.

Brown bears are believed to have come to Kodiak Island well before the last ice age, when there was a land bridge connecting Asia to North America. No one knows for sure, but a number of experts think the bears made it to the island by riding ice floes.

Once they got here, they lost contact with the rest of the brown bear world—and thrived in splendidly productive genetic isolation.

"This is really a rich place for a bear to live," said Leslie A. Kerr, manager of the Kodiak National Wildlife Refuge, which was created in 1941.

Although bears fatten up on salmon, most of what a bear eats is grass, berries and roots. On island beaches, they also consume seaweed, crabs and the washedup corpses of sea mammals, including whales, sea lions and otters.

Another key reason why Kodiak Island is so rich in bears is that it is so poor in oil, timber and gold—the stuff that historically drew hordes of people to Alaska. Cattle ranching ended here in the late 1950s, since it was more lucrative for local residents to take rich people bear hunting (at $10,000 to $15,000 per outing) than to punch cows.

Nearly all of the island's 12,000 residents are clustered in the fishing town of Kodiak. Outside the town, however, bears outnumber people by a 3-to-1 margin.

Ironically, Alaska's worst environmental disaster—the oil spill caused in 1989 when the *Exxon Valdez* ran aground in Prince William Sound—was good for the bears.

The spill came after the Alaska Native Claims Settlement Act had turned over to native groups large tracts of land that had been part of the federal wildlife refuge. Desperate for money, native corporations were under intense pressure to sell, subdivide or develop the land. Biologists feared development would harm salmon runs and greatly reduce bear habitat.

The $1 billion settlement Exxon paid to the state and federal governments changed this dismal equation. The money bought conservation easements, which protected the bears. The crown jewel in the bear-saving effort, the Karluk River, was protected last year by such a purchase.

U.S. Fish and Wildlife Service

A Kodiak bear surveys the river off Kodiak Island in the Gulf of Alaska. Kodiaks often weigh 1,500 pounds and stand nine feet tall.

A Kodiak bear is about twice as big as his much-feared brown bear kin called a grizzly.

Giant omnivorous bears do not, of course, behave themselves on all occasions.

Intoxicated by the smell of garbage, they have a habit of coming into town and busting things up. Four years ago, when bad weather played havoc with berry bushes, eight garbage-craving bears were killed near the town of Kodiak. A deer hunter was also mauled (but not eaten) in the first fatal bear attack on the island in more than 70 years.

The city, however, did not become antibear, according to Larry Van Daele, a state wildlife biologist. It reinforced the electric fence around the dump, installed bearproof Dumpsters islandwide and beefed up education programs about bears. Bears retreated to berry bushes, salmon rivers and beachcombing.

As for the fatal mauling, Alaska's newspapers and television stations didn't blame the bear. They noted, instead, that the late deer hunter failed to obey this simple rule: If a Kodiak bear grabs the deer you have shot, let it go. ❑

Ice Shelf In Arctic Breaking Into Pieces

Scientists say massive slab's decline signifies polar climate change

***Columbus Dispatch,* 10 July 2003, by Usha Lee McFarling (*Los Angeles Times*)—** The largest ice shelf in the Arctic—an 80-foot-thick slab of ice nearly the size of Lake Tahoe—is breaking up, providing more evidence that the Earth's polar regions are responding to ongoing and accelerating rates of climatic change, researchers said.

The Ward Hunt ice shelf, located 500 miles from the North Pole on the edge of Canada's Ellesmere Island, has broken into two main parts and a series of massive ice islands. What remains is riven with cracks that extend for miles.

"It's really a breakup," said Warwick Vincent, a professor of biology at Laval University in Quebec and co-author of the report, which will be published in the journal *Geophysical Review Letters.* "We'd been measuring incremental changes each year. Suddenly in one year, everything changed."

This is the largest ice separation in the Arctic.

"This type of catastrophic (event) is quite unprecedented," said Martin Jeffries, a professor of geophysics at the University of Alaska Fairbanks and coauthor of the report.

David Bromwich, a weather scientist at Ohio State University's Byrd Polar Research Center, said Antarctic ice shelves have been releasing sections of glaciers and icebergs for years.

"In March of 2002, the Larsen B ice shelf catastrophically disintegrated," Bromwich said. "It's probably reflective of the warming we know is going on in the Southern Hemisphere as a whole, but it's locally amplified."

Warmer summer temperatures produce more melt water on the surface of ice shelves. The water gravitates through cracks and fissures and eventually helps release large pieces of ice.

Bromwich said it is not yet certain these releases are the result of worldwide global warming. Still, he said, "Global-warming predictions are that the largest changes will be in the polar regions." Because of their longevity and response to temperature, ice shelves are considered "sentinels of climate change."

In recent years, scientists have seen ice shelves the size of Rhode Island break off of western Antarctica in response to warmer temperatures.

Data recorded at the nearby military station Alert, on Ellesmere island, show that temperatures there have been warming since 1967 at the same rates as in western Antarctica: about 1°F per decade. The average July temperatures of recent years of 34°F were above the temperature—32°F—where ice shelves are known to break up.

The researchers said other factors, including ocean circulation and atmospheric patterns, could be contributing to the changes.

Jeffries said the Ward Hunt ice shelf was measured at 150 feet thick in 1980. Now, it appears to be less than half that in some places. The ice shelf has lost 90 percent of its area since 1907 when explorer Robert E. Peary crossed it on his way to the North Pole.

Vincent's research was basically flushed out to sea when a freshwater lake that had been dammed behind the ice drained.

The lake supported an ecosystem of strange microbes, or extremophiles, that are of particular interest to scientists trying to understand the limits of life on Earth and in outer space.

"The whole lake just drained. It just disappeared entirely," Vincent said. "We're at a point where we're starting to lose these unique cryo-ecosystems of the North before we can understand them."

Dispatch *reporter Mike Lafferty contributed to this story.* ❑

Ice Depletion Threatens Arctic

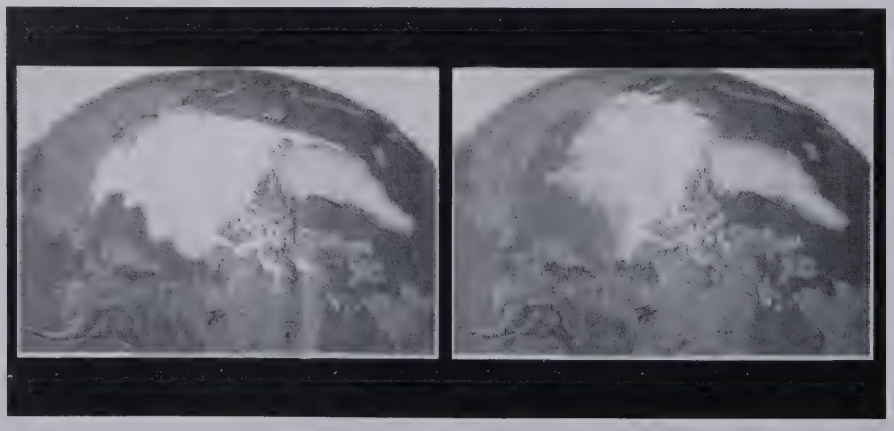
David Bromwich, a polar weather expert at Ohio State, says it's just a matter of time before the summer ice at the North Pole is replaced by open ocean.

Reduced sea ice also could change the weather.

"It would cause a lot more precipitation on the land around the Arctic Ocean and warmer temperatures in the arctic and in Canada," Bromwich said.

No matter what causes global warming—a natural occurrence or greenhouse gases from human activities—the Earth's temperature is definitely rising.

"Now is the warmest time in the last 1,000 to 2,000 years," Bromwich said. ❑



Diminishing ice

Arctic temperatures are warming so rapidly that scientists estimate summer ice at the North Pole will be replaced by open ocean as soon as 2050. Possibly within a decade, the fabled Northwest Passage will be open year-round to ships.

Source: Alaska Sea Grant Program

Notes on Capt. Donald M. Taub's Commentary About Camp Century

by Dave Norton, Arctic Editor

Cliff Bekkedahl, Editor, granted me the privilege of reading two long hand-written, illustrated letters he received from Capt. Donald M. Taub (USCG, Ret.), in response to "Questions to Readers" (*The Polar Times*, Fall-Winter issue, 2002, p.29). Taub served the Coast Guard in Greenland in 1959-60 during the seasons when the U.S. Army and Army Corps of Engineers installed Camp Century about 100 miles in from the edge of the Greenland Ice Cap. He was commanding officer of the 19-man camp and LORAN station, Cape Atholl, south of Thule Air Force Base (actually located between Cape Atholl and Cape York, in the northern part of West Greenland).

Capt. Taub's observations from 1959-60 and his invited return visit to the area in 1994 must be considered historically significant. Although they bear only tangentially on Camp Century (nuclear-power-supplied experimental sub-ice-surface camp), and although some of his accounts of individuals and families of the native Greenlanders of his acquaintance in this region have unhappy endings, Taub's letters chronicle events in the exploratory and military past, spanning nearly nearly 150 years of U.S.-Greenland affairs in this region (1853-1994). High points of Taub's chronology of NW Greenland events concerning the region and U.S. relations include:

- Elisha Kent Kane Expedition, 1853-1855;
- Dr. I. I. Hayes USN expedition of 1860-61;
- C. F. Hall's disastrous expedition, 1871-73;
- CDR. Staley, USN, and the *Bear*, 1884, searching for Army Lt. Greeley's survivors;
- USA CDR Robert E. Peary's 7-expedition period, 1891-1909;
- [Peary had claimed NW Greenland for the U.S.A. in 1909, but the administration of the region was turned over to Denmark after WW I in 1920 for U.S. in exchange for Denmark's ceding control over the Virgin Islands in the Caribbean.]
- U.S. Coast Guard sent to protect Greenland's neutrality following Nazi Germany's occupation of Denmark in April 1940;
- Cryolite mining at Ivugtut, ingredient for aluminum production and 300,000 aircraft produced in WW II, 1939-45;
- Bluie-sites (14) constructed for ships, weather observations, aircraft landing, 1941-45, amongst these the first airstrip at Thule;
- Post WW II strategic weather station and airfield network included Eureka, Resolute (1947) and Thule Air Force Base (begun in 1951);
- Three USCG Loran Stations, including Cape Atholl, constructed 1953;
- Relocation of Dundas village from the Thule AFB "defense zone," to "Kanak" (Qaanaaq)1953; USAF establishes "No-Contact Rules" between the 5,000-man airbase and the 'aboriginal' population;
- BMEWS construction expels Greenlandic Inuit from more of their regional hunting grounds, 1959-60;
- Camp Tuto (fly, or construction base camp) and Camp Century built on Ice Cap, 1959-60;
- Sled dog teams at USCG LORAN station (and probably at other NW Greenland stations) replaced by snowmachines, ~1963;
- Caribou/reindeer from exotic stock released in this region by *USCGC Westwind*, allowing local herds to rebound, hunting to continue, 1967;
- Cape Atholl USCG LORAN station decommissioned and physically removed, 1976;
- Capt. Taub invited to revisit friends at Qaanaaq (formerly spelled Kanak), 1994.

In addition to their historical perspectives, the Taub letters are remarkable for the author's personal familiarity with native people in this district, their backgrounds, and even their use of terms over time as their language (Inuktitut/Greenlandic) has evolved in its orthography. The reason for this insight is how effectively the small (19-person) LORAN station in 1959-60 welcomed native Greenlanders traveling along the coast. Whether officially excused, or unofficially self-exempted from the "Defense Zone" and "No-Contact Rule" exercised by the USAF Base at Thule, the Coast Guard effectively integrated local inhabitants' activities with the station's mission. As an absorbing hobby, then Lt (jg) Taub talked for hours with visiting travelers, to analyze with them their family histories and genealogies. He became acquainted with descendants of Robert E. Peary, Matt Henson and other progeny of 19th and 20th century explorers, as well as with relatives of Tookoolito ("Hanna") noted for saving the survivors of the Hall expedition, and others who played key roles in regional history.

By way of analytical comments, Capt. Taub's letters note the sad irony that the post-WWII segregation between US armed forces and local inhabitants grew out of well-intentioned US concerns lest military installations negatively affect the culture of local inhabitants.

Another (of many) intriguing observations describes changes Taub noted when he visited NW Greenland in 1994:

"The "base camp" for the construction of Camp Century, 100+ miles out on the Ice Cap, was a temporary camp called Camp Tuto. It was located at the edge of the Ice Cap, on the dirt ground, located about 10 to 15 miles from the Thule Air Force Base by dirt road. This was where the initial preliminary ice-tunneling experiment was done in 1959; perhaps even earlier in 1958?

"An earthen ramp was built to haul materials up from ground level to the edge of the Ice Cap there. (I visited it again in 1994, and WOW! This ramp led up into "the sky," to nowhere, because the Ice Cap had receded considerably. Roughly, a thickness of about 50 to 75 feet had disappeared. And this reduction in it ice extended as far as my eye could see in both directions. Global warming?? 1994 vs. 1959-60.)"

These letters and the accompanying copies of photographs are the sorts of thoughtful material that belong in an archive of the author's choosing. As I say, my glimpse of their contents and sweeping recall were a privilege. ❑

P-38, Long Buried In Greenland Ice, Flies Again

***Air Force Magazine*, January 2003**—A P-38 frozen under a Greenland glacier for 50 years flew again in October 2002, culminating a 10-year recovery and restoration effort that honors World War II pilots and Arctic rescuers.

The aircraft, dubbed *Glacier Girl*, was one of six P-38s and two B-17s—all factory-fresh—that made forced landings in Greenland in July 1942. The US aircraft were en route to England when they went off course, possibly following bogus weather reports broadcast by Nazi submarines. As the aircraft ran out of fuel, they set down on the arctic ice. Except for one P-38 that flipped over, all the aircraft made controlled landings.

The warbirds were abandoned in place, but the 25 Army Air Forces crew members were rescued by five Army personnel who braved 15 miles of hazardous ice floes and crevasses to reach them. All the crewmen and their rescuers survived.

Entrepreneur and former Air Force pilot J. Roy Shoffner financed six expeditions to locate and subsequently raise one P-38 from this "Lost Squadron," which was resting nearly 270 feet beneath the arctic ice. The enterprise cost $638,000. Recovered in 1992, *Glacier Girl*—an F model P-38—was brought to the Lost Squadron Museum in Middlesboro, Ky., where it has been undergoing restoration for the past 10 years at a cost of more than $3 million.

Parts destroyed or made unusable from the long sleep in Greenland were manufactured from scratch or obtained through exhaustive detective work. The aircraft was brought to airworthy condition and flew Oct. 26 before a crowd of some 20,000 aviation fans and well-wishers, including some of the pilots and rescuers involved in the 1942 incident.

Glacier Girl is the only P-38F still in existence and one of only two dozen P-38s extant worldwide, out of the more than 10,000 produced. Only about six are flyable. The newly restored aircraft will travel the air show circuit and, between shows, serve as the centerpiece of the Lost Squadron Museum. ❑

Arctic Oil and Gas Digest

Assembled by Dave Norton, Arctic Editor

Editor's Note: *This edition of the 'Digest' is short. At article submission deadline in mid-November, the two houses of Congress were supposedly near agreement on a national Energy Bill that had been drafted almost entirely by the Republican majorities in each body. The near-final inclusions and exclusions demonstrate that energy bill amendments were driven more by regional loyalties than by party line loyalties. Thus, Alaska's two senators and one representative—all Republicans—never had much chance of outweighing the regional concerns manifested by larger delegations from more populous states. Amendments providing for drilling in the Arctic National Wildlife Refuge, and provisions for tax relief and loan guarantees for companies that might (underscore "might") build a natural gas pipeline from Alaska's North Slope southward to tie into existing energy markets, were never popular enough widely enough to survive the advocates of ethanol subsidies in corn-growing states. In the next issue of* The Polar Times*, look for an expanded treatment of Canadian and Russian Arctic petroleum developments.*

Energy Bill Leaves Alaska On Empty

***Fairbanks News-Miner Washington Bureau*, WASHINGTON, 15 November 2003, by Sam Bishop**—Congress will neither open the Arctic National Wildlife Refuge to oil drilling nor offer a tax credit on sales of Alaska natural gas in a national energy bill this year, the lead Republican House and Senate negotiators announced Friday afternoon. Sen. Pete Domenici, R-N.M., and Rep. Billy Tauzin, R-La., said a final deal had been struck on all provisions of the bill.

ANWR drilling and the gas tax credit were cut, they said. However, some details were still under negotiation Friday afternoon, according to Sen. Lisa Murkowski's chief of staff, Justin Stiefel. Those details could affect Alaska, he said.

The final version of the Republican-crafted proposal is to be made public at noon today.

Forty-eight hours later, at noon Monday, the House-Senate conference committee will meet to approve the bill and send it back to each house for final passage, they said.

If all goes well said Domenici, the conference committee chairman, the bill will be on its way to President Bush before Congress breaks for Thanksgiving. Democrats didn't offer to accommodate that schedule, though.

"I think we're being asked to take it or leave it," said Sen. Jeff Bingaman, D-N.M. "I'm not comfortable with it."

Many Democratic senators were already flying home for the weekend to their home states Friday afternoon, he noted, so the 48-hour review period, which Domenici has promised for weeks, was hardly adequate.

Bingaman said the bill contains a number of items that could draw a filibuster from Democratic senators. A provision to prohibit defective product suits against oil companies that make the gas additive MTBE, for example, could give some Democrats "heartburn," Bingaman said.

Some Democrats had threatened a filibuster if ANWR drilling were allowed. Without that in the bill, a reporter asked, couldn't Democrats declare victory and vote for the bill?

"It's hard to pass a 1,700-page bill and justify it on the basis of what's not in it," Bingaman responded. Domenici said both he and Tauzin wanted ANWR drilling in the bill, but were convinced that Senate Democrats would filibuster it to the grave.

"We have been informed, and we believe, by the minority leader, that he has sufficient votes that we would be engaged in a filibuster," Domenici said quietly to a packed room of reporters in the Capitol. "Everything we've worked on would be dead, so it's not in.

"You should know, however, that a huge natural gas production project from Alaska running down to Chicago is in the bill," he said, his voice growing louder. "That is, the tax measures that will cause that to happen are there."

After the news conference, though, Domenici clarified that those tax measures will not include a tax credit designed to kick in when natural gas prices are low.

The other tax measures in drafts released to date have included accelerated depreciation on the proposed line and special tax rules for any North Slope processing plant built to feed it. The drafts have also offered a federal loan guarantee of 80 percent of any pipeline construction loans, up to $18 billion, as well as language to speed agency and any court reviews of the line.

Nevertheless, North Slope oil producers have said the pipeline doesn't make financial sense unless they can get a tax credit at low prices. The Bush administration opposed the tax credit, saying it would distort markets too much. The administration supported the other gas line promotional measures.

Members of Alaska's congressional delegation have said in recent weeks, as it became clear that energy bill conferees had rejected the tax credits, that they may be able to find other ways to encourage the pipeline. Whether they would be able to insert any such incentives before noon today remained unclear Friday evening.

Sen. Ted Stevens, R-Alaska, said last week he will continue to probe legislative changes that could improve the proposed line's economics, even after passage of the energy bill.

Stevens, Sen. Lisa Murkowski and Rep. Don Young all said they also are looking at ways in which the government could condemn North Slope gas—i.e. take it from the oil companies in exchange for payment of an as-yet-undetermined fair market value.

Tauzin said the Alaska natural gas pipeline work would create 400,000 direct and indirect jobs. In a news release, Domenici said the entire bill would stimulate creation of about 840,000 jobs. "This bill will put a stop to the job losses that make it difficult for our economy to recover," Tauzin said.

Environmental groups and at least one conservative taxpayers' group condemned the bill, though. Jill Lancelot, president of Taxpayers for Common Sense, said the bill offers bonding authority for several entertainment centers and commercial developments. The developments would be built using modern, energy-efficient technology or would have some other environmental tie-in. "Under the guise of 'green' building, we're getting billions of dollars of pork for shopping malls," she said in a Friday afternoon news conference.

Anna Aurilio, legislative director of U.S. PIRG, said the bill is a disaster for the environment and "our pocketbooks." "We hope Democrats will stand up and filibuster it," she said.

The bill provides billions of dollars in subsidies to energy companies, she said, including money for "clean coal" projects. Using the phrase "clean coal" is like saying "healthy cigarettes," she said.

Earlier versions of the bill contained a $125 million loan to the Alaska Industrial Development and Export Authority to rework a coal-fired power plant near Denali National Park built under an earlier federal clean coal program. The plant has sat dormant since 1999 despite an investment of more than $225 million by the federal and state governments.

One draft section of the energy bill released in September also would allow the Department of Interior to reduce or eliminate royalties from oil development in the federally owned National Petroleum Reserve-Alaska, which occupies much of the central and western North Slope.

Alaska Gov. Frank Murkowski endorsed that possibility in a letter. The state might lose some royalty income, since the federal government splits NPR-A proceeds 50-50 with the state, but the benefits from additional oil work would worth the loss, Murkowski said.

The draft language also states that the Interior Department must "waive administration" of any oil and gas lease in NPR-A where the Arctic Slope Regional Corp., the regional Native corporation, owns the subsurface mineral rights.

The Wilderness Society referred to the NPR-A section in its statement on the energy bill. "From the Otero Mesa in New Mexico to the Rocky Mountain Front in Montana to the most ecologically and culturally sensitive

(Continued at right)

Russian Nuke Sub Sinks, Killing 9

***Associated Press*, MOSCOW, 30 August 2003**—An aged Russian nuclear submarine being towed to a scrapyard sank in a gale in the Barents Sea Saturday, and the defense minister said nine of the 10 crew aboard died in the accident.

The sub's sinking raised concerns of environmental damage and further dented the deteriorating navy's prestige.

The storm tore off pontoons attached to the K-159 submarine for its trip to the dismantling point, but Defense Minister Sergei Ivanov also said the ship's conning tower had been left open. He fired the commander of the submarine divsion that included the K-159, news agencies reported.

The two nuclear reactors of the 40-year-old submarine have been shut down since it was decomissioned in 1989, and radiation levels remained normal after it sank about 3 nautical miles northwest of Kildin Island near the entrance to Kola Bay, Russian military officials said.

Navy deputy chief Adm. Viktor Kravchenko said one sailor was rescued and the bodies of two others were pulled out of the 50°F waters. Ivanov said Saturday evening that "I'm forced to recognize...that it is impossible to find any of the remaining seven crew members alive."

The Chief Military Prosecutor's Office said Navy officials were being charged with violating navigation rules and "it is already obvious that the Northern Fleet Command broke the law and didn't show enough resolution in carrying out rescue operations," the Interfax news agency reported.

Although the navy insisted that the K-159's nuclear reactors posed no environmental hazard, environmentalists quickly warned of a possible radiation leak that could contaminate the busy fishing area.

"The risks are very high," Alexander Nikitin, a retired Russian navy captain who heads the St.Petersburg branch of the Bellona Foundation, a Norwegian environmental group, told The Associated Press.

Nikitin said that the uranium fuel, which was loaded into the submarine's reactors some 30 years ago, was far more radioactive and dangerous than a fresher load would be.

He harshly blamed the navy for moving the crumbling, leaky submarine to the scrapyard some 190 miles away from its base, saying that its nuclear reactors should have been removed prior to the journey.

"They have chosen the cheapest and the worst option," said Nikitin, whose report on nuclear risks posed by the Russian navy led to his arrest in 1996 and 11-month imprisonment on treason charges. He was acquitted in 1999.

The K-159 sank about 4 a.m. in waters 560 feet deep after four pontoons attached for the towing operation were ripped off the sub during a battering storm.

Retired Adm. Eduard Baltin recalled that the K-159 was already taking water when it made its last mission in 1983. He said on Echo of Moscow radio that the navy shouldn't have placed the crew on the submarine, saying that "it was like putting them in a barrel full of holes."

President Vladimir Putin was informed of the accident while on the island of Sardinia for a three-day meeting with Italian leader Silvio Berlusconi. The sinking "testifies to how the sea demands discipline. It does not forgive any kind of blunder or mistake," Putin said while conducting Berlusconi on a tour of a Russian missile cruiser anchored off Sardinia.

The tour was apparently intended to boost the prestige of the Russian navy, badly hurt by the August 2000 sinking of the *Kursk* nuclear submarine which killed all 118 men on board.

In contrast to the *Kursk* disaster, when the government issued scarce and conflicting information, the Defense Ministry quickly reported the K-159 accident. "Our military and political leadership has at least learned some lessons from the *Kursk* tragedy," said retired Capt. Igor Kurdin, the head of the St.Petersburg-based Submariners' Club.

The *Kursk* was raised from the Barents Sea floor in October 2001 by a Dutch consortium in an unprecedented salvage effort that cost the Russian government about $65 million. Ivanov said the K-159 also would be raised.

The condition of Russia's aging nuclear submarine fleet has long raised international concern. Russian officials said it will cost an estimated $3.9 billion to scrap over 100 mothballed nuclear submarines that await destruction. Yet last year, the Russian government budgeted just $70 million for improving nuclear safety in the country as a whole.

The K-159 entered service in 1963. A November-class submarine, it was intended for attacking enemy ships with conventional or low-yield nuclear torpedoes. "It was a workhorse of the Cold War," Kurdin said. ❑

places in the National Petroleum Reserve-Alaska, this bill hands over public treasures for private profit, while scrapping or delaying long-standing protections for clean air, clean water, and public health," the organization said. ❑

Tax Issues Hold Up Energy Bill

***Fairbanks News-Miner Washington Bureau*, WASHINGTON, 16 November 2003, by Sam Bishop**—Links to 15 sections of a proposed national energy bill appeared in blue on congressional energy committee Web pages at noon Saturday, indicating that details on those topics were just a computer mouse click away. The tax section, though, remained black and unlinked to any additional information.

That color demonstrated that, contrary to claims made Friday afternoon by the lead Republicans writing the bill, a final compromise had not been reached. Disagreements over tax issues have already delayed completion of the bill for weeks.

The tax section has been of particular interest to Alaska's congressional delegation because that's where they've been trying to insert a tax credit triggered by low natural gas prices to improve the economics of a proposed pipeline from the North Slope to the Lower 48.

Sen. Pete Domenici, R-N.M., said Friday that the Alaska gas line tax credit was not in the bill. Without the final tax language, though, it wasn't possible Saturday to tell whether the section might contain some other mechanism to advance the gas line or other Alaska interests.

Sen. Lisa Murkowski, R-Alaska, had planned a news conference in Anchorage Saturday afternoon to discuss the energy bill but canceled it "since the Senate Finance Committee has not finished details of the tax provisions and energy incentive provisions proposed for the bill," according to a media advisory issued by her office.

The tax provisions were being written by members of the House and Senate tax writing committees—the Ways and Means and the Finance committees, respectively. Those committee members in turn were to have supplied their work to the House-Senate conference committee writing a final version of the overall energy bill.

Domenici, the chairman of the conference committee, and his GOP House counterpart, Rep. Billy Tauzin of Louisiana, held a news conference Friday to announce that agreement had been reached on all facets of the energy bill. They said the details would be released on the Web site on noon on Saturday. That would be followed by the final meeting of the conference committee starting around noon Monday, they said.

Domenici has promised Democrats 48 hours to review the final proposal, which is being written primarily by the Republican majority. A Saturday e-mail from the spokesman for Democrats on the Senate Energy and Natural Resources Committee, which Domenici chairs, said the tax section was expected to be released that night, but nothing had appeared by deadline.

The energy bill draft released Saturday does contain language streamlining the administrative and judicial reviews of the proposed gas line. It also offers a federal guarantee on up to $18 billion in construction loans for the project, but the amount guaranteed can be no more than 80 percent of the line's cost.

The final version also allows oil lease extensions and reduced government royalties to spur exploration in the National Petroleum Reserve-Alaska, which covers much of the central and western North Slope. ❑

***As The Polar Times* went to press, the Energy Bill was shelved by the threat of filibuster by Senate Democrats. Congress is expected to resume debate on the Energy Bill in January 2004.**

Barrow Facility Back In Energy Bill

News-Miner **Washington Bureau, WASHINGTON, 19 November 2003, by Sam Bishop**—Approval language for a new research facility in Barrow has reappeared in a national energy bill, but the suggested spending level has nearly doubled compared to a similar proposal from last year.

Republicans writing this year's energy bill added language authorizing $61 million for the Barrow facility at the request of Sen. Ted Stevens, R-Alaska.

"That's great news for scientists and it's great news for the North Slope," said Glenn Sheehan, executive director of the Barrow Arctic Science Consortium.

The consortium, a partnership between the North Slope Borough, the Ukpeagvik Inupiat Corp. and the Ilisagvik College, operates a small research center in the remains of the Naval Arctic Research Laboratory four miles outside Barrow. Using $1 million Stevens routed through the National Oceanic and Atmospheric Administration last year, the consortium has been making larger plans.

The $61 million proposal surfaced for the first time this year in a draft released Saturday by the Republican chairman of a conference committee organized to write the final version of the energy bill.

The conference committee approved the bill Monday night. The House passed it Tuesday. The Senate was expected to consider the bill today, although some senators have threatened to filibuster it. The bill cannot be amended at this stage.

The energy bill language doesn't actually spend any money on the research center, which is dubbed the Barrow Geophysical Research Facility. Rather, the bill authorizes the expenditure, a necessary step under congressional procedure.

However, Stevens also has $8.5 million for the project's first phase in this fiscal year's spending bill for the Department of Commerce, NOAA's parent agency. That bill has yet to be voted upon by the Senate, but could be within days.

Last year, Stevens inserted a $35-million authorization for the Barrow center in a multi-billion-dollar global climate change research program he co-sponsored with Sen. Robert Byrd, D-W.Va. The Senate, under the Democratic majority, added the program to its energy bill.

However, the bill died in November when Senate Democrats and House Republicans couldn't agree on a final version.

Sheehan, the Barrow consortium's director, said the price tag went up this year both because the original $35 million was a bare-bones figure and because planners learned more about likely costs during the past year.

The facility will have natural seawater piped to it, Sheehan said. That will probably require a mile-long slanted well drilled out to the ocean floor, he said.

"And then you have to get rid of it," he said of the seawater used in the labs. "That's a complex, technological effort."

The price tag went up this year because the original $35 million was a bare-bones figure and because planners learned more about likely costs during the past year.

Sheehan said planners to date envision three structures. One main building would host a central area for several large-scale experiments, a number of smaller labs, lodging for 50 researchers and some office space. A warehouse would be built nearby for fuel and other items. A third structure would replace the NOAA climate-monitoring lab at a more distant spot on the tundra.

Sheehan said the facility is needed because existing scientists are limited by the old facilities. This year, the consortium's "visiting research days"—the number of researchers multiplied by the number of days they were present—totaled 6,000, Sheehan said.

He said many of the researchers were working on projects supported by the National Science Foundation, which pays the consortium to run the existing center. NSF-funded researchers can use the labs and get room and board without paying.

The NSF, however, has not been the lead agency on the new project. Stevens has directed all the proposed spending to date through NOAA.

Sheehan said he thinks NSF is supportive nonetheless. "My belief is that NSF believes that as long as the outcome is a facility that is usable and improves the research being done today and the research that scientists are contemplating over the next several decades, this has got to be a good thing," he said.

An NSF representative has attended all the planning meetings, he said. NSF also paid for three national meetings where the research community endorsed a center of this sort, he said.

Sheehan acknowledged that there has been some grumbling among scientists about the consortium's center. They're worried that the cost will reduce available research money, he said. "Typically when they realize that's not the case, they lose their worry," he said. "No research budget is being tagged to do the construction."

Sheehan said no new construction for scientific endeavors has occurred since the 1960s in Barrow. The Navy built its research lab there in 1947, then turned it over to the University of Alaska Fairbanks in 1954. In1980, it was abandoned. UIC, the Barrow village corporation, saved it from demolition and helped form the consortium.

Washington, D.C., reporter Sam Bishop can be reached at sbishop@newsminer.com or (202) 662-8721 ❑

Ice Age Site's Role In Doubt

Washington Post, **28 July 2003, by Guy Gugliotta**—Scientists say new research shows that a famous Ice Age Siberian site believed to be an important way-station in the long journey of humans from Asia to North America is too recent to have played a pivotal role in the migration.

Instead of being 17,000 years old, as originally reported, new radiocarbon dating shows that the encampments ant Ushki Lake, on Siberia's Kamchatka Peninsula, are at most only 13,000 years old, and therefore contemporaneous with the oldest undisputed Native American settlement at Clovis, New Mexico. Ushki is thus unlikely to be a precursor to Clovis.

Ted Goebel of the University of Nevada at Reno led a team that excavated and reexamined Ushki. He was accompanied by Margarita Kidova, widow of the Soviet archaeologist who did the original excavations that began in the 1970s. Results of their research appear in this week's edition of the journal Science.

The new research offers fresh insights in the contentious debate over the origin of the first Americans. For decades the prevailing view has held that Siberians crossed a land bridge over the Bering Strait and drifted southward to New Mexico. Finding the Siberian settlements that preceded Clovis, however, has proved difficult, and the new study appears to eliminate Ushki as a candidate.

Instead the new findings are likely to embolden a growing number of archaeologists who argue that settlement of the Americas occurred long before Clovis and may have involved multiple entry points. Traditionalists scoffed at these theories for years, but the excavation in areas as diverse as Pennsylvania and Chile suggests that settlers may have been in place in the Americas 15,000 years ago or even earlier. ❑

Chilling Conclusion: Arctic Is Indeed Warmer

***USA TODAY,* 30 October 2003, by Jack Williams**—People who live around the Arctic and scientists who study it are seeing clear signs that most of the top Earth is getting warmer. Exactly why this is happening, and what it means for the Arctic and the rest of the world, isn't as clear.

Satellite temperature measurements of the area show that spring is arriving earlier and fall is landing later.

People have been talking about Arctic warming for years, but the NASA study used satellite data to read temperatures over the entire Arctic, not just from a few scattered thermometers as past studies have done. Annual temperatures in parts of the Arctic have warmed as much as 1.9°F since 1981, though some parts have cooled by as much as 0.16°F.

In addition, less ice covered the Arctic Ocean at the end of summer than any year since satellites began keeping track of it in 1979.

But it's not just satellites and weather instruments that are seeing the changes.

Native hunters around the Arctic report that earlier spring melting and later fall freezing of sea ice are upsetting centuries-old patterns of hunting and fishing. The ice is no longer reliably in sync with the migrations of seals, whales and fish.

Though few people live in the Arctic, what happens there is important: The Arctic is part of Earth's air-conditioning system, along with the Antarctic. Warm air and ocean currents flow into the regions; cold air and currents flow out. Polar changes could affect not only global temperatures but also things such as rainfall, snow patterns and storm paths. The usual suspect is global warming. But is that what's responsible?

Some experts think so. Burning fuels such as gasoline and coal add carbon dioxide to the air, which climate scientists agree is increasing Earth's temperature.

Others, such as James Morison of the University of Washington, say it isn't that simple. The biggest recent changes in the Arctic, including temperature increases and shifts in winds and ocean currents, occurred in the early 1990s and have since "relaxed," said Morison.

These big changes, he says, seem to b e more like the El Niño pattern of changes in tropical Pacific Ocean temperatures, which have global effects. Scientists have identified such a pattern, called the Arctic Oscillation, which shifts back and forth naturally. That could explain why parts of the Arctic can get cooler as others warm.

Still, Morison said, a general warming of Earth could be pushing the oscillation toward a phase that warms the Arctic.

In fact, Morison said, the oscillation helps explain why summer sea ice is thinner than in years past. Since the 1980s, wind changes associated with the oscillation have shoved more ice from the Arctic into the Atlantic Ocean between Greenland and Norway.

Ice reflects away most of the sunlight that hits it. When the ice opens up, the exposed ocean water absorbs sunlight. The water and the air right above it grow warmer, which tends to melt ice and expose even more water to the sun.

That is what scientists call a "positive feedback," with warming bringing more warming. But with the ocean exposed, more water can evaporate into the air, increasing cloud cover, which can block sunlight and mitigate warming—a negative feedback. Scientists are still trying to understand the Arctic's feedbacks and how they might play out in the future. ❑

Drop That Harpoon! Whale Hostilities Revisited

***Reykjavik Journal,* REYKJAVIK, Iceland, by Lizette Alvarez**—The windblown tourists turned their heads just in time to spy the broad, glossy back of a minke whale jutting through the waves.

"A beautiful viewing," said Einar Orn Einarson, the guide on the whale watching boat, the *Elding*. "The minke whale is getting curious. There he goes now. One o'clock. Look one o'clock."

But just a few nautical miles away on this rainy day, Iceland's fishermen were pursuing a more traditional brand of whaling. After a 14-year hiatus, Iceland's mythic whale hunters had bagged their first whale, also a minke, as part of a new scientific research program that falls outside the 1986 ban on commercial whaling.

For Icelanders, whaling is as much about national identity as it is about safeguarding economically vital stocks of fish that they worry may be depleted by an expanding population of whales. Whale hunters have been harpooning the giant mammals since the 15th century here, and whale meat remains a local delicacy. Killing a whale, Icelanders are fond of saying, is no different from shooting a deer or reeling in a marlin.

A photograph in the next day's national newspaper summed up the island's elation over its plunge back into whaling (which the vast majority of people here support). It showed the skipper of the boat, with a toothy grin, holding aloft the whale's bloody heart. Lying at his feet was the dead whale.

But the photograph and the international outcry over Iceland's whale hunting are just the sort of publicity that tourism advocates in Iceland fear as they seek to draw visitors to this beautiful, remote island of 290,000 people. Already, they say, visitors have canceled trips and bombarded them with outraged e-mail.

Undeterred, Iceland's Marine Research Institute, a government agency, plans to oversee the hunting of 38 minke whales by year's end and a total of 200 over two years, a number it pared back from 500. The scientists are planning to analyze the whales' stomach contents and determine just how much fish a typical minke whale eats.

Scientists believe the 43,000 whales that live in the vicinity of Iceland eat a total of one million to two million tons of fish each year. A more precise figure, the Icelandic government says, will help it better manage the island's precious fish stocks.

But tourism officials say that whale watching brings in more money than whale catching ever did. Of all the tourist attractions in the area, none has grown faster in the past five years than whale watching, which lured 62,000 passengers to boats last year.

"This decision is, if anything, a step backward," said Asbjorn Bjorgvinsson, manager of the Husavik Whale Center and chairman of the whale watching association. "It can severely damage our business."

Washington, which consistently opposes killing whales for scientific research, is reviewing the remote possibility of sanctions, even though Iceland is breaking no laws.

"We believe the necessary scientific data can be gathered by well-established nonlethal means," said Rolland Schmitten, the United States commissioner to the International Whaling Commission.

At the same time, the environmentalists are rallying opposition to Iceland's decision, trying to persuade Icelanders that killing whales is not the same as killing cod, and that Iceland would not benefit economically from whale hunting.

Despite the controversy, Iceland's actions fall squarely within international law. The International Whaling Commission banned commercial whaling in 1986—a ban that Iceland acceded to in 1989—but it exempted whaling for scientific reasons and for subsistence.

Several countries and native peoples hunt whales, including the Alaskan Inuit, who have landed 280 bowhead whales in the past five years. Japan, which hunts under the research banner, is killing 644 whales this year and selling the whale meat domestically.

Norway is the only country permitted to hunt whales for commercial gain—because it officially objected to the moratorium and has shrugged off international criticism. Norway has found a limited market in whale meat, raising questions about whale hunting's profitability.

But whale hunting is not purely an economic issue to Icelanders. "For us, as a nation, we need to have the right to harvest the nature around us," said Mr. Einarson, a former whaler who is now the guide and captain on the *Elding*. "Modern society is drifting apart from nature, and people are not understanding the circle of life. Here we understand it."

And they are reluctant to let environmentalists subvert their traditions. ❑

The Polar Times : 60—40—20 YEARS AGO

Polar Times—December 1943

Close to the mid-point of WWII, this issue focused entirely on Arctic matters and, specifically, wartime events in Alaska. In last year's Fall-Winter issue of *The Polar Times,* we noted that the 1942 issue hailed the opening of the Alaskan Highway. The 1943 issue confirmed that the "Alaska Road Passes Stiff Winter Test." Other headlines revealed:

- U.S.-Canada Forces Seized Kiska Aug. 15
- 30,000 Reindeer Slain By Wolves
- Pribilof Sealing Nets Record 117,164 Skins; Japanese Failed To Halt Resumption [of sealing]
- Secret Nazi Base In Arctic Erased

War prompts all kinds of developments and, as an aid to aviators in the northern reaches, the lead article describes a chart devised by Edward Weyer Jr. for determining the length of sunlight and twilight in the northern hemisphere. *(See reproduction on opposite page.*)

Editor's Query: Does anyone know of or have a comparable chart for the southern hemisphere??

Polar Times—December 1963

Antarctica dominates this issue, starting with a cover photo of the Military Vicar, Francis Cardinal Spellman, at the South Pole where he visited and conducted Christmas services for men stationed at the pole.

Predominantly press clippings, the issue afforded a variety of articles about the wintering-over experience, burgeoning U.S.-Soviet scientific cooperation, and scientific studies under way in Antarctica. One scientific expert, Dr. Charles R. Bentley of the University of Wisconsin's Geophysics and Polar Research Center, offered the following data: "The Antarctic Continent is covered by 22 quadrillion tons of ice. Soviet scientists at the South Pole declared the ice to be 9,000 feet thick, and the mean annual snowfall in Antarctica is 1.5 feet over the 4,500,000 sq. mile continent."

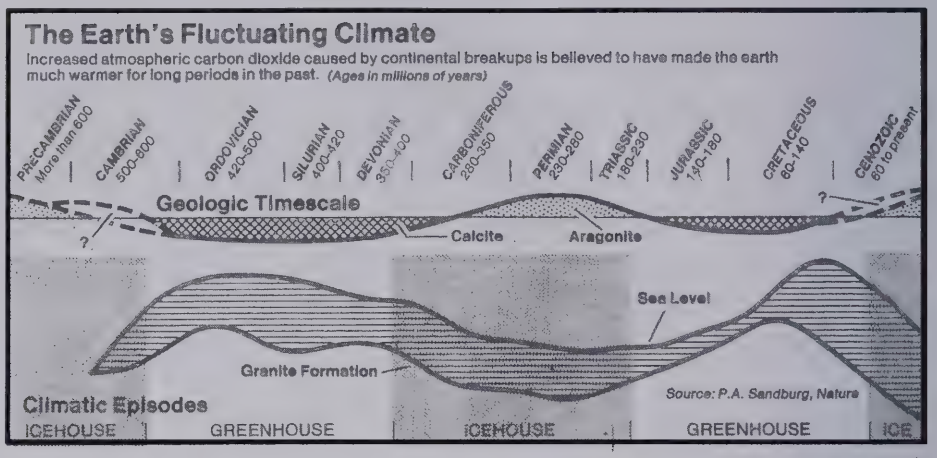
Arctic articles, while fewer in number, touched on significant developments:

- Arctic exploration excites oilmen
- Oil exploration pushed in Alaska
- Seven Harvard men going home after Mt. Mckinley climb
- Alien ways peril Eskimo culture

Editor's Note: Ah, the good old days!

Polar Times—December 1983

Our lead article describes the 93 projects approved by NSF for conduct in Antarctica in 1983-1984. The West Antarctica Ice sheet and marine ecosystems investigations will be the highlights of the year's scientific study.



Philip A. Sandberg; Nature Magazine

Periods of calcite formation correspond to high atmospheric carbon dioxide and thus to warmer weather. Aragonite deposition occurred when carbon dioxide levels were low. Rates of granite formation refer to North America and are an index of volcanic discharges of carbon dioxide. Sea level is also linked to climate change.

An article taking the long view asserts that "Earth Said To Be In Icehouse," subtitled "New Theories Explain Why Polar Regions Were Once Much Warmer." Separate reports in the scientific magazine *Nature* and *The American Journal of Science*, each propose that there have been prolonged periods alternating between abnormal [greenhouse] warmth and those subject to an "icehouse" effect. Carbon dioxide is the key ingredient in the equation, and the amount in the atmosphere varies dependent on major geologic events taking place on earth.The graphic above illustrates the independent findings of Dr. Phillip A. Sandberg of the University of Illinois and Dr. Eric Banon at the National Center for Atmospheric Research in Boulder, Colo. *(Also see Andrew Revkin article, this issue.)*

The Soviet research station in Antartica reported a record temperature of minus128.6°F. ❑

Tooto the First Innuit Player in NHL, Brings Toughness to the Nashville Predators

Jordin Tooto *(at left in photo)*, an Innuit from the recently formed Canadian territory of Nunavut—with his tales of hunting whales and skinning caribou—is an exotic curiosity even in hockey, a multinational sport with players from 24 countries.

"He's a throwback," Nashville's Coach Barry Trotz said. "There should be more like him." He is not yet a big point producer, with one goal and two assists in 15 games. But with 27 penalty minutes, he is impressing teammates, angering opponents and winning fans with a collision-based style that recalls the NHL of the 1960's.

He started playing organized hockey late, because there were no leagues in his hometown, Rankin Inlet, near Hudson Bay and a mere 200 miles from the North Pole. His combative nature impressed scouts, and he combines fearless play with an amazingly accurate shot.

When Jordan Tooto made his NHL, debut last month, his family members were among the 40 people who traveled to Nashville from Rankin Inlet. ❑

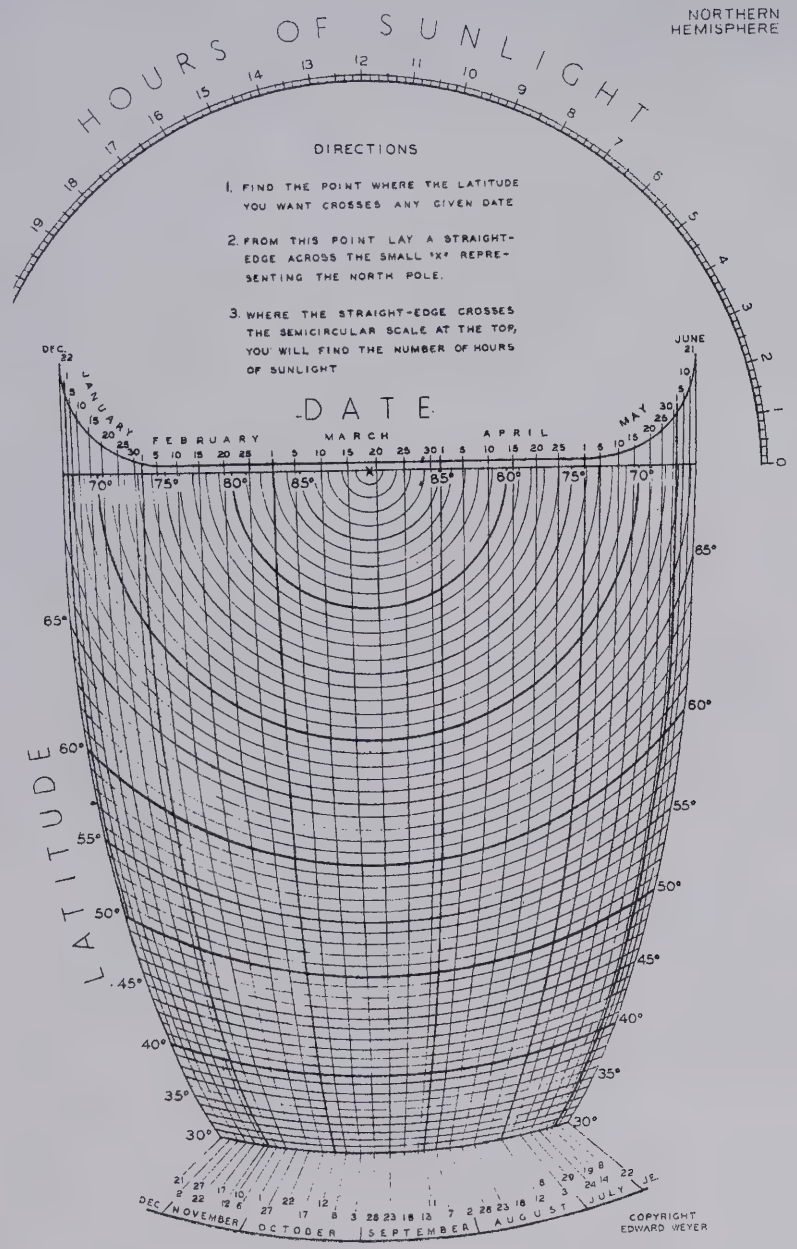

NORTHERN HEMISPHERE
HOURS OF SUNLIGHT
DIRECTIONS
1. FIND THE POINT WHERE THE LATITUDE YOU WANT CROSSES ANY GIVEN DATE
2. FROM THIS POINT LAY A STRAIGHT-EDGE ACROSS THE SMALL "X" REPRESENTING THE NORTH POLE.
3. WHERE THE STRAIGHT-EDGE CROSSES THE SEMICIRCULAR SCALE AT THE TOP, YOU WILL FIND THE NUMBER OF HOURS OF SUNLIGHT
DATE
DEC 22
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE 21
LATITUDE
DEC/NOVEMBER/OCTOBER/SEPTEMBER/AUGUST/JULY/JE.
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FIG. 1

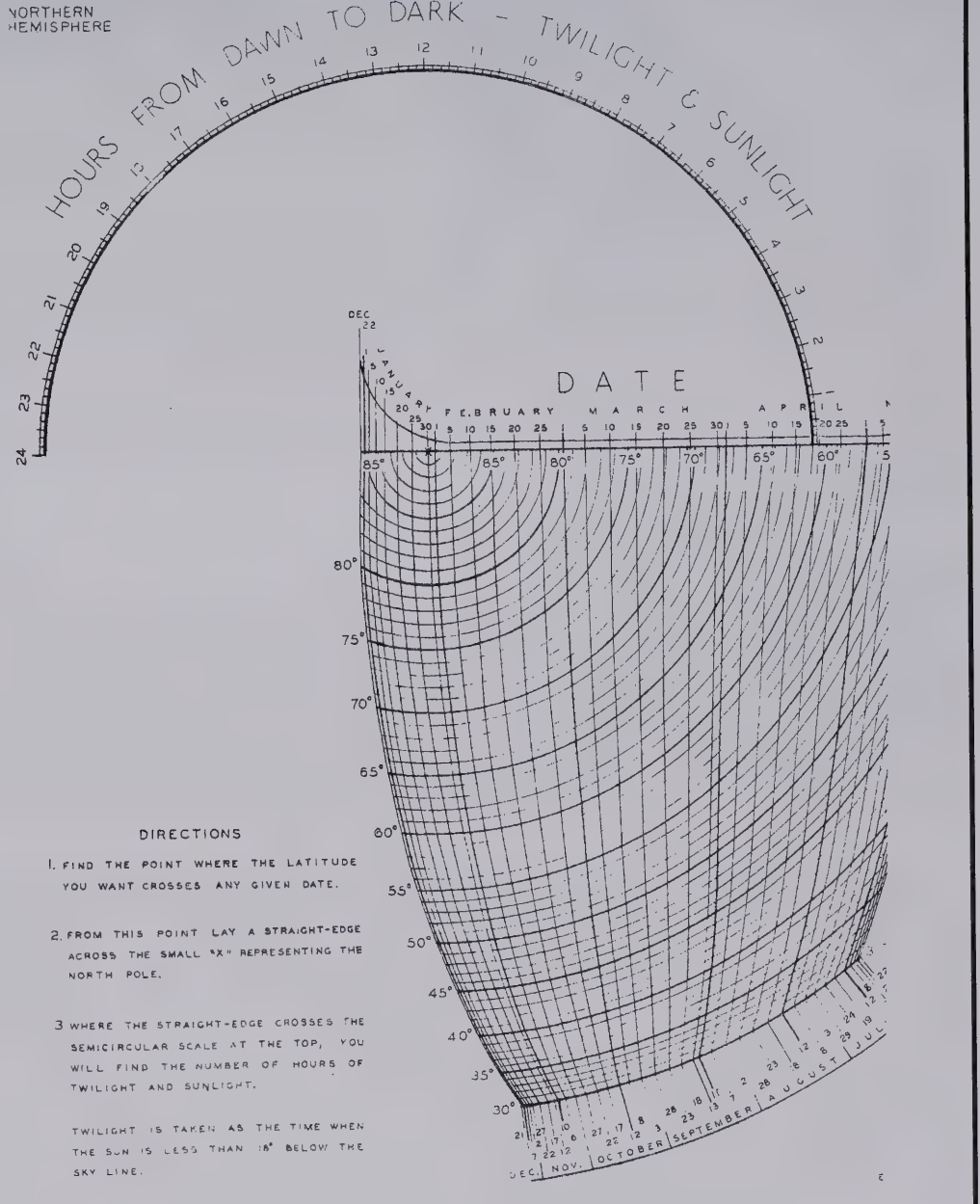

NORTHERN HEMISPHERE
HOURS FROM DAWN TO DARK - TWILIGHT & SUNLIGHT
DATE
DEC 22
JANUARY
FEBRUARY
MARCH
APRIL
DIRECTIONS
1. FIND THE POINT WHERE THE LATITUDE YOU WANT CROSSES ANY GIVEN DATE.
2. FROM THIS POINT LAY A STRAIGHT-EDGE ACROSS THE SMALL "X" REPRESENTING THE NORTH POLE.
3 WHERE THE STRAIGHT-EDGE CROSSES THE SEMICIRCULAR SCALE AT THE TOP, YOU WILL FIND THE NUMBER OF HOURS OF TWILIGHT AND SUNLIGHT.
TWILIGHT IS TAKEN AS THE TIME WHEN THE SUN IS LESS THAN 18° BELOW THE SKY LINE.
DEC/NOV./OCTOBER/SEPTEMBER/AUGUST/JULY

FIG. 2

BOOK REVIEWS

Meteorites, Ice, and Antarctica

By William C. Cassidy. Cambridge, Cambridge University Press, 2003. ISBN 0 521 25872 3 (Hardback) 349 p., maps, b&w illustrations, indexes, references, U.S. $30.00.

Anyone who has been involved in the U.S. Antarctic Research Program in the last few decades knows the name Bill Cassidy. Bill for many years was field leader of a team that hunted meteorites in Antarctica and, by knowing the places to look for them, made it nearly as simple as picking potatoes out of a freshly harvested field. Bill's dedication led to the founding of the U.S. Antarctic Search for Meteorites (ANSMET) project, 1976 to 1993, and he led expeditions in Antarctica during those years. The intensity for this search did not begin until the 1970s because, until that time, only a handful of meteorites had been found in Antarctica by simply coming upon one occasionally. The key to discoveries was the finding by a Japanese team of several hundred meteorites in a limited field area inland from their coastal station in Antarctica. It was thought, therefore, there must be a concentration mechanism in effect in order to produce that unusual number.

Such was, and is, the case, a result of meteorites falling on the Antarctic ice sheet more or less randomly, as they have been doing for millennia worldwide, but upon burial by succeeding snowfall and transported by internal glacier flow under gravity toward the coasts of the continent, they ultimately end in the ocean bottom after calving icebergs take them out to sea. However, if natural barriers occur along this "conveyor belt" system, such as a mountain range along the coast, "stranding surfaces" occur where the ice surface ablates by wind as glacier flow advances, thus building up concentrations of meteorites as more of them surface from internal layers in the ice sheet. These areas, normally "blue ice' fields, are relatively common in Antarctica, and have provided nearly all of the meteorites found there to date—a total of some 30,000 recovered by U.S., Japanese and European teams (p. 99). One of those areas— Allan Hills—is fortunately within helicopter range of the U.S. base McMurdo, making it easier for field teams to collect large numbers of specimens. Other blue-ice and related collecting areas, however, have also been sampled, and more remain for future study. A colleague, Ian Whillans, and Bill Cassidy deduced and refined the "conveyor belt" idea and published it in the journal *Science*, thus involving not only geology but also glaciology in the understanding of the situation of meteorites in Antarctica.

I worked as a field geologist in some of the areas that Bill and his team visited in later years, and my experience of finding no meteorites when others found them in large numbers (especially in one of my areas in 1969-70) tells you something about knowing the characteristics of prospective areas and also what to look for. The point is that I was not looking for meteorites but other things, geologically speaking, and I expect I kicked one or two of them while traversing the area.

Most, but not all, meteorites are fragments of asteroids. Two exceptions are those from the Moon and from Mars. During 24 field seasons from 1976 through 2000, the ANSMET project recovered more than 11,000 meteorite specimens, including 5 from Mars and 8 lunar specimens. (The world's collection contains 20 Martian meteorite falls and, as of Spring 2002, 35 lunar meteorites, of which 18 are from Antarctica—the Japanese Antarctic Research Expeditions have recovered 10 of the latter.)

The chemistry of the meteorites, when compared with Earth rocks, provides identity as to source. There are basically three types of meteorites depending on their overall compositions—*irons*, *stones*, and *stony irons*. The names are what the words imply. Irons are composed of metallic iron, as well as nickel, cobalt and traces of numerous other elements and compounds. Stony meteorites generally compare with our model for mantle rocks of Earth, but most of them also contain flecks of metallic nickel-iron. Stony irons are what the words indicate—a mix of metallic iron and silicate minerals similar to those in Earth's mantle. The two major divisions of stony meteorites are chondrites and achondrites. About 90 percent of the meteorites that fall are chondrites, a mix of material from different thermodynamic origins. An interesting part of the book has to do with the chemistry of the meteorite "family," which, on the technical side, is still made readable for a general audience.

Earth's gravity has done us a favor as a recipient of these space objects.

Why bother with collecting meteorites, housing them at NASA's Johnson Spacecraft Center in Houston, Texas, and making them available for scientists worldwide to study them? In some respects, a simple answer is to find and analyze parts of our solar system that are delivered to us by natural means rather than go to the expense of launching expeditions in space to collect samples directly from our Moon, Mars and the asteroid belt. Earth's gravity has done us a favor as a recipient of these space objects, and the Antarctic ice sheet as a natural repository for millions of years until they reveal themselves for study. Overall, they provide clues and evidence of an early solar system that cannot be gained by other means, as well as a comparison of Earth rocks

with anything else we can obtain. The ice sheet of East Antarctica is estimated to have been in existence for the last 20 million years, and measurements of terrestrial ages of meteorites have been made from about 10,000 to 300,000 years. Given the same frequency of falls over 20 million years, one can imagine the number of meteorites at the bottom of the ocean.

What does it take to put together such a program over so many years? Success, for one thing. If no meteorites, or very few, had been found in the early stages of Bill's program, the funding source for his work, the U.S. National Science Foundation, would probably have cut the program. He had some trouble in getting it started initially, in fact, until he proved what the Japanese had already determined—there are concentrations of meteorites on the ice sheet, and now we know where to look for them. Another component of Bill's success was the make-up of his collecting teams. An Appendix (B) lists field participants for the period 1976-1994, and it quickly becomes apparent that Bill recruited people from organizations worldwide who worked on meteorites in laboratories to accompany him in the field. It must be added that one of the recurrent names in that list from 1980-81 to 1993-94 is John Schutt, labeled as "crevasse expert, independent contractor," which tells us something about the terrain under study and its risks to human safety. John is as much a legend around McMurdo as is Bill Cassidy, although Bill, now retired as Emeritus Professor at the University of Pittsburgh, has found the time to write this very interesting account of his years with the meteorites. The book includes black-and-white photos, a color satellite image of the collecting areas west of McMurdo Sound and numerous field anecdotes that reflect Bill's sense of humor. The book is required reading for those interested in Antarctic science in general, how it is conducted and the value of persistence and hard work in a cold environment. ❑ ***(Review by John Splettstoesser, APS President)***

The Complete Guide to Antarctic Wildlife

By Hadoram Shirihai. Princeton University Press, 2003. 510 p., Australian $49.50

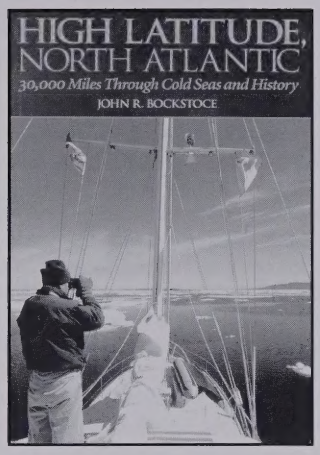
Hadoram Shirihai's *The Complete Guide to Antarctic Wildlife* is a remarkable book, probably the most complete general work on the topic ever produced, with more than 500 color photographs, 35 color plates and a 381-item bibliography. But these numbers tell only part of the story. The photographs are, almost without exception, simply terrific, representing the best work of 52 different photographers, each shot chosen for its beauty or its ability to show a particular aspect of the animal's identifying characteristics.

Many rarely-seen species are depicted, and in some cases it would be difficult to find a good photograph published anywhere else. The color plates by Brett Jarrett are truly works of art; those of the marine mammals are especially beautiful. The bibliography not only includes the classic exploration accounts by Amundsen, Scott and Shackleton, but also many esoteric scientific papers with titles such as "Sighting of a Leach's Storm Petrel *Oceanodroma leucorhoa* near the Antarctic Polar Front" and "Dynamics of penguin-fur seal interactions at Bouvetøya."

Each species is well-illustrated and well-described, with detailed sections on identification, distribution, biology and conservation status. The data is the best available—dozens of referees in all parts of the world were consulted for their expertise on individual species. Each description is accompanied by a map showing the species' distribution around Antarctica and the Southern Ocean.

A surprisingly large portion of the book, fully 110 pages, is devoted to site descriptions of Antarctica's different regions, as well as each of the peri-Antarctic islands. Each description includes the area's main features, landform, climate, habitats, bird and marine mammal populations (with species checklist), human history and information about visiting the area. For this reason, the book is useful for all visitors to the Antarctic, not just those interested in wildlife.

At first, the book's small type size bothered me. But the book is already quite heavy (every page is coated stock), so increasing the type size would only make it uncarryable. That would be a great shame, since it is simply essential for a trip to the Antarctic—as I can attest from personal experience. In any case, one quickly gets used to the small type. A few very minor errors—the Antarctican Society does not have a website, but there is an Antarctican news website—do nothing to mar this amazing and valuable book. ❑ ***(Review by Jeff Rubin, Antarctic Editor)***



High Latitude, North Atlantic: 30 000 Miles Through Cold Seas and History

By John R. Bockstoce. 2003. Mystic CT: Mystic Seaport, viii + 216 pp. Illus., maps, Chronology, Index, Endnotes, Appendices. Softbound, $24.95 (U.S.).

Sooner or later a first-rate book tends to serve up a single memorable passage that persuades me of the entire book's enduring worth. In this case, the persuasive passage hooked me even before I reached Chapter One. The introduction, "Bellot Strait, Gateway to the Eastern Arctic," is a finely crafted description of the "twenty-mile fjord-like slash that separates Somerset Island from the Boothia Peninsula" (p. 3) in Arctic Canada, where the western (Pacific) and eastern (Atlantic) Arctic meet. From his account of negotiating the treacherous currents of Bellot Strait, the author distills the global significance, and his own awe, of this biogeographic boundary, as if in addition to his credentials in archaeology and history he were also a trained biologist. Enchanting and splendid a stage-setter as his introductory description is, I could only hope that his book could spellbind me to this degree throughout. As it turned out, I needn't have worried.

John Bockstoce draws readers into discovering with him (all over again, if necessary) the diversity and enormity of the Arctic, present and past. Arctophiles, sailors, and dévotées of history connected to personal experience are bound to enjoy Bockstoce's accounts of his years of high-latitude voyaging in his 60-foot motor sailboat, *Belvedere*. Others, too, will want to acquire this book because it is beautifully organized, observant of the past, and insightful at many levels of readers' enjoyment.

Make no mistake, this is a profoundly thoughtful volume. The depth of scholarly research upon which it is based, however, passes unostentatiously beneath light-hearted and occasionally comic tales of adventuring about the Atlantic approaches to the Arctic. The book's subtitle could have been "Painless history, geography and archaeology lessons from the eastern Arctic." Accounts of stark beauty of the many landmarks the author visits—sometimes tinged with his mariner's respectful fear of the landmarks' no less dramatic currents and weather—connect the present to the past, illustrated often with modern photographs and ancient illustrations. They could have made this into a coffee table-sized volume, but I suspect that Bockstoce and his publisher avoided producing such a massive book with good reason. We readers can absorb more from its near pocket-book size and can at least dream of carrying it along on our own voyages of discovery to some of the same destinations: Svalbard, Iceland, Scotland, the Faroes, Shetland Islands, Newfoundland, Labrador and Baffin Island, among others.

Realizing wistfully that I can never match Bockstoce's familiarity with the eastern Arctic—having visited or studied no more than 15 percent of the sites and historical events that he describes—I can nevertheless gauge the quality of his research. Thus, for example, while recounting *Belvedere*'s 1992 explorations of a succession of bays in northwestern Spitsbergen, largest island of the Svalbard Archipelago, Bockstoce does a magnificent job of weaving all the intrigue of past uses of those fjords into what I consider sweeping but sharp focus. In the space of 15 crisply written pages (23-38) he marshals evidence of the climatic setting, the ancient source of the name, Svalbard (A.D. 1194), the earliest mariners' records of the Archipelago (Barentsz, 1596; Hudson, 1607), and the institution of multinational whaling based from Svalbard that began as shore-based hunting of the bowhead whale in the 16th century. His account swings abruptly forward to the present, to portray the ugly residue of Russo-Norwegian contested sovereignty over Svalbard at the end of the Soviet era, as his crew toured the dilapidated Soviet coal mining enclave at Barentsburg (28-30). On northward, *Belvedere* proceeded to Ny Ålesund (78°50'N) and, within the sound, Kongsfjorden (King's Bay). This is where in 1926, mere days apart, Richard E. Byrd and Floyd Bennett took off in a fixed-wing airplane to reach the North Pole, followed by Roald Amundsen, Umberto Nobile and Lincoln Ellsworth launching the dirigible *Norge*, headed via the North Pole toward the western Arctic. Then back to 1992, *Belvedere* sailed 56 nautical miles (104 km) farther north to 79°44'N, where the crew visited early 17th century whalers' tryworks at Smeerenburg (Dutch for "blubbertown") and Danskøya (Dane's Island). From nearby Virgohamna (Virgo Harbour), the earliest aerial attempts to reach the North Pole were made by the Swede Salomon August Andrée in 1897 and by U.S. newspaperman Walter Wellman in 1906, 1907 and 1909. The volume of industrial artifacts left by these early aviators, including the extensive hangar foundations and hydrogen-generating apparatus used by Wellman, impressed the crew of the *Belvedere*.

This book is meant to be savoured. Reading *High Latitude, North Atlantic* aloud by geographic stages works well as a means to spread enjoyment of the book over time and to share this enjoyment with others. ❑ ***(Review by Dave Norton, Arctic Editor)***

OBITUARIES

Richard R. Conger

***The Washington Post*, 6 November 2003, by Patricia Sullivan**—Richard R. Conger, 82, a Navy photographer, died 9 October 2003. Mr. Conger enlisted in the Navy in 1938. Assigned to aerial mapping, he photographed or filmed many Pacific islands and Japan during World War II. In 1946, he went with Operation Highjump to Antarctica, where he would travel three more times.

After a plane carrying an eight-person crew and the captain of the *USS Pine Island* crashed, Mr. Conger helped rescue the six survivors. The closest place to land was 12 miles away, so the rescue plane's commander and Mr. Conger set out in a lifeboat through ice-choked waters, pulling a sled. They got the crew aboard the lifeboat and arrived back at their plane just before they would have been iced in.

In 1947, Mr. Conger and a commander found the Mt. Erebus hut abandoned in 1910 by polar explorer Ernest Shackleton. Mr. Conger's photographs showed that it was just as Shackleton's team had left it.

His wife of 55 years, Eleanor M. Conger, died in 1998; survivors include three children.

Harold C. "Bud" Fisher

Harold C. Fisher, USN (Ret) died in Milton, Florida on 28 August 2003. He served 25 years in the Navy and retired as a Chief Boatswain Warrant Officer.

During the deployment phase of Deep Freeze I, Fisher served as the Executive Officer on YOG-34, a small gasoline tanker that would be used as a fuel barge in Antarctica. Although it was self-propelled, the YOG had a top speed of about 8 knots, so it was towed from the U.S. to New Zealand by the *USS Glacier*. From New Zealand to Ross Island, the vessel proceeded under its own power to the outer ice limits, where it was towed by the *USCGC Eastwind*. Getting the YOGs safely to McMurdo and frozen in was essential to the success of the IGY and Operation Deep Freeze, since permanent fuel tanks were not constructed at McMurdo until DF-III.

He is survived by his wife Suzanne, three children and two stepchildren. ❑ ***(by Billy-Ace Penguin Baker)***

Guy Mannering

Photographer Guy Mannering, 78, died in Timaru, New Zealand on 7 August 2003.

Mannering's first trip to Antarctica, in 1962, came about through friendships with American personnel at Operation Deep Freeze headquarters at the Christchurch airport at Harewood. The trip was instrumental in producing *South: Man and Nature in Antarctica*, for which he took the photographs and Graham Billing wrote the text. He returned to the ice in 1964 on a special assignment for the New Zealand National Publicity Studies and in 1966 as the Scott Base photographer.

He is survived by his wife Margie and a daughter. ❑ ***(by Billy-Ace Penguin Baker)***

Capt. Leonard Hill

UK Telegraph online, 18 September 2003—Captain Leonard Hill, 94, who commanded the RRS Discovery II on her last two commissions before World War II, died 2 September 2003.

Within months of taking command at the age of 27, Hill, a Master Mariner and hydrographic surveyor, rescued the American explorer, Lincoln Ellsworth, and his Canadian pilot, Herbert Hollick-Kenyon at Adm. Byrd's abandoned station, Little America II.

Discovery II, with her two seaplanes, had been diverted from an oceanographic cruise to relieve the two men. On January 15 1936, Ellsworth was awakened at 22.00 to see Kenyon standing over him with a note in his hand. He had heard the roar of a motor overhead, although our dug-out home was 15 feet beneath the snow, and had crawled up to the surface in time to see a parachute descending through the fog which had enveloped us for two weeks. The parcel contained food and the note was from Captain Hill.

Hill's service in this relief operation was acknowledged by the award of an OBE in 1937.

In July 1944, while commanding the captain class frigate Cooke (formerly an American ship), Hill attacked and sank German U-boat 214, for which he was awarded a DSC.

He was predeceased by his wife, the former Mary Snelus, and is survived by two daughters. ❑

Margaret Murie

***The New York Times*, 24 October 2003, by Verlyn Klinkenborg**—Over the centuries, the ink has gone to the discoverers, the men who found or claimed or opened new territories. But we've gotten to a place in history where the preservers are the ones who deserve the ink. One of those was Margaret Murie, better known as Mardy, who died on Sunday at her ranch near Moose, Wyo., at the age of 101.

When Olaus Murie, a federal wildlife biologist, went north to study caribou, one of the natural resources he discovered in Alaska was the first woman to graduate from the University of Alaska. Mr. Murie married her in an Alaskan village in 1924, and they honeymooned deep in the wilderness, an adventure recounted in Ms. Murie's book "Two in the Far North."

The Muries recognized in each other a mission bigger than marriage. It is largely thanks to their efforts that we have an Arctic National Wildlife Refuge to protect today.

Mr. Murie died in 1963, three years after President Dwight Eisenhower established the refuge. But Ms. Murie helped extend the idea of protecting wilderness areas to the whole nation. She was an unflagging proponent of the Wilderness Act, signed in 1964, and she helped shape the Alaska National Interest Lands Conservation Act, signed by President Jimmy Carter in 1980. That legislation set aside 104 million acres of land in Alaska and doubled the size of the Arctic National Wildlife Refuge.

Ms. Murie did none of these things alone. But her zeal and her belief in the idea of wilderness made it possible for many other people to believe in it and defend it zealously, too. Thanks in part to her work, great swaths of land were set aside with a single presidential pen stroke. It may seem as if such enormous achievements lie beyond our scope in the world as we know it. But our job now is to maintain both the will and the conscience needed to protect the wilderness our predecessors set aside. ❑

Frank A. Pitelka

***The New York Times*, 3 November 2003, by Stuart Lavietes**—Frank A. Pitelka, whose studies of wildlife in the Arctic and California helped establish a field of study documenting the way environmental factors affect animal behavior, died Oct. 10 at his daughter's home in Altadena, Calif. He was 87.

An emeritus professor of zoology at the University of California at Berkeley and a leader in the field of behavioral ecology, Dr. Pitelka conducted extensive research in the Alaskan tundra, exploring the effects of the availability of food on the brown lemming population and on the behavior of arctic birds. He also contributed to the classification of jays and documented the behavior of acorn woodpeckers and hummingbirds.

He published his findings in more than 200 scholarly papers, in the process helping define the field's major questions and lines of investigation.

"He trained virtually the entire branch of behavioral ecology," said Dr. Paul W. Sherman, a professor of animal behavior at Cornell.

Dr. Pitelka was awarded the American Ornithologists' Union's highest honor, the Brewster Medal, in 1980, and the Eminent Ecologist Award in 1992 from the Ecological Society of America.

Frank Alois Pitelka was born in Chicago and received his bachelor's degree from the University of Illinois and his doctorate from Berkeley. Shortly afterward, he joined the university's zoology department.

Although he retired from teaching in 1985, he continued in his role overseeing the Hastings Natural History Reservation in Carmel Valley, an ecological study site run by the university's Museum of Vertebrate Zoology, until1997.

He is survived by his sons Louis, of Frostburg, Md., and Vince, of Cookeville, Tenn.; his daughter, Kazi Pitelka; five grandchildren and two great-grandchildren. His wife, Dorothy, also a professor of zoology at Berkeley, died in 1994. ❑

Major Contributors In This Issue

Peter Anderson • Billy-Ace Baker
Peter Barretta Jr. • Nathan J. Frank
Abel Shafer

CORRECTIONS

• **On page 24 of our Spring-Summer 2003 issue**, we incorrectly stated that Abel Shafer's article, "Around and Around She Goes," was his first bylined article for *The Polar Times*. He also wrote "A Return Visit of an 'Aurora Australis' to its Origin" for the Spring-Summer 1998 issue of The Polar Times.

• **On page 27 of our Spring-Summer 2003 issue**, in the review of the book "Let Heroes Speak," we incorrectly stated that Shirase's Japanese Antarctic Expedition was omitted from the book. In fact, the expedition is covered at the end of the chapter on Roald Amundsen. ❑

Capt. Fred L. Austin

Aviation pioneer Capt. Fred L. Austin, a U.S. aviation pioneer, holder of 30 world flight records and architect of two round-the-world flights that helped to define the boundaries of the modern jet age, died at his home in Reno, Nevada on March 8. He was 88.

He was the "architect" of the first round-the-world flight over the North and South poles. A watershed pair of globe-circling flights in mid-1960s paved way for safe, reliable corporate jet travel and demystified and regularized commercial air transit over both Poles

Capt. Austin's aviation career began in 1932 and went on to include 31 years with Trans World Airlines as senior captain and corporate executive, where he piloted then-new passenger aircraft such as the Lockheed Constellation, Boeing 707, DC-2, DC-3, and Martin 202/404. He was founder and president of Aero-Commuter/Golden West Airlines, which would become the largest commuter airline in the U.S. and president of U.S. operations for Short Brothers Ltd. of Northern Ireland, the world's first manufacturer of aircraft. He performed military land evaluation work with the Lockheed F-104 jet fighter, was project architect and pilot on the first flight around the world over both poles in 1965, and organizer and pilot on the record-setting 1966 Jet Commander Around the World flight with co-pilot Arthur Godfrey.

Capt. Austin's 50 years in aviation were recognized in 1981 when he was inducted into the OX5 Aviation Pioneers Hall of Fame.

In a remarkable and now antiquated example of global cooperation, more than 20 national governments participated in the actualization of the June 1966 Jet Commander Around the World flight, which alone established 22 international flight records, including fastest around the world. The flight was instrumental in establishing safety and reliability standards in business jet aircraft while operating in extreme temperature ranges through a wide variety of airports, from the tropics to the frigid zones.

The 1966 Jet Commander flight was the historical first flight of a business jet around the globe.

In November, 1965, Capt. Austin teamed up with fellow Trans World Airlines Captain Harrison Finch to plan, fund and execute the Rockwell Polar Flight, the first flight to circumnavigate the globe via the North and South Poles. Using a Flying Tiger Line Boeing 707 dubbed the Pole Cat, Captains Austin and Finch, joined by TWA luminary Captain Robert Buck, Arctic pilot and explorer Bernt Balchen, Col. W.F. Rockwell, Lowell Thomas, Jr., and Captains Jack Martin and James Gannett, among a host of passengers, circled the earth in 51 hours, 27 minutes. Eight world records were set during the flight. The Rockwell Polar Flight demystified the notion of pole-to-pole commercial air travel, contributed to modern understanding of clear air turbulence, and furthered the conceivable boundaries of modern passenger air travel.

Fred Lester Austin, Jr. was born on November 22, 1914 in Los Angeles, California. Capt. Austin decided on a career in aviation while still a young boy, often running several miles to a local airport upon seeing incoming aircraft in the early 1920's. He never looked back, preferring to set his sights on distant horizons.

Capt. Austin was a member of The Explorer's Club, The Society of Experimental Test Pilots, The Quiet Bird men, The Wings Club of New York, The American Polar Society, the Airline Pilots Association, the Aero Club, and the OX5 Club of America. His pilot logbooks will be archived in the National Air and Space Museum in San Diego.

He will be missed by family, friends, and a cadre of pioneering Quiet Birdmen who will now count one less amongst their dwindling fraternity of historic airmen. ❑

ANNOUNCEMENTS

Wilderness Research Foundation

Wilderness Research Foundation is a new organization created to address a situation in which less than 20% of researchers applying for grants to the National Science Foundation and the National Geographic Society are funded. The purpose is to raise funds in the private sector to mount scientific expeditions restricted to PhDs and PhD candidates. The initial project is an expedition to southern Axel Heiberg Island in the Canadian High Arctic, scheduled for the summer of 2004. The aim of the expedition is to examine the paleontological, anthropological and biological evidence for abrupt climate change and to interpret the impact of climate change on living organisms and complex ecological systems. There is room for more researchers. **For more information, visit *www.wildernessresearch.org*, contact APS Board member Sheldon Bart at *WildResch@aol.com*, or call 201-451.3860.** This is an opportunity to be involved in a subject (climate change) that has, and is, affecting all of us. ❑

USS Atka Reunion

The third annual reunion of the *USS ATKA* (AGB-3) is planned for March 25-27, 2004, in Charleston, South Carolina. **For more information visit the website *www.ussatka.org*, contact CWO4 Henry G. Giles, USNR (ret.) at 14053 Yale St., Livonia, MI 48154-5219, or call (734) 591-3068.** ❑

ABOUT OUR BACK COVER

"Spilling Their Beans"— Century-old provisions surround Shackleton's Hut at Cape Royds on Ross Island, Antarctica. Photo by Jeff Rubin.

About Your Annual APS Dues

The Board of Governors has set the dues structure for the year 2000 and after as follows:

Annual Dues: Rate $15 (Outside U.S. $17)
Library Dues: Rate $20 (Outside U.S. $22)
Annual Corporate: Rate $100
Life Membership: $250 (Outside U.S. $270)

Each member's dues include a subscription to* The Polar Times. *The dues for each calendar year are payable, in advance, on receipt of a direct-mail statement, mailed each October from the Membership Center. Blue and white dues envelopes are no longer included in Fall-Winter issues of* The Polar Times. *If you have paid your dues ahead, for future years, you will not receive the annual statement until your dues are about to expire.

Address changes are entered in our membership file as we receive them, as are dues payments. Each member's entry includes the date of dues expiration. Mailing labels for* The Polar Times *are printed from this file, with the dues expiration date at the top of each label. You can see whether you are ahead or behind with your dues by looking at the mailing label. If you are a Life Member, that designation will appear at the top of the label instead of a dues expiration date.

We honor all dues paid in advance for future years, at the current rate, but upon expiration, new rates, if they have been adopted, will apply.

Multiple year dues payments are welcome and encouraged, as are donations to the Society. The American Polar Society is a tax exempt organization as defined by Sec 501 (C)3 of the IRS Code. ❑

Purpose of APS

"The purpose of the American Polar Society is to bring together people interested in research and exploration in the Arctic and Arctic; to preserve the record of polar research and exploration; and to support and encourage research and exploration in polar and polar-like regions. Toward these ends, the Society will collect and disseminate information about polar regions; compile written records, oral histories, maps, photographs, film and video, and electronic information relating to polar regions; aid organizers and members of polar expeditions; and maintain contact with scientists, explorers, research institutions and interested parties." ❑

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